THE UNIVERSITY OF ALBERTA

PSYCHOLOGICAL ADJUSTMENT AND THE PERCEPTION OF SOCIAL REALITY

by

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

EDMONTON, ALBERTA

APRIL, 1965

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Psychological Adjustment and the Perception of Social Reality" submitted by Anne Marie Decore in partial fulfillment of the requirements for the degree of Master of Arts.

ACKNOWLEDGEMENTS

I am indebted to the staff of the Alberta Hospital, Ponoka, the staff of the Northern Alberta Institute of Technology, the executive of the Canadian Daughters League, and Dr. O. Oyen who gave the permission and made the arrangements necessary for the testing of the respondents.

The respondents whose cooperation and time made this study possible also deserve mention.

Dr. G. Nettler, the chairman of my committee, provided the encouragement, assistance, and criticism that brought this research to fruition. To him I am particularly grateful.

I also wish to thank the other members of my committee, Dr. T. E. Weckowicz and Dr. H. A. Parker, for their guidance.

Finally, Mrs. R. Bossio's competent typing deserves commendation.

ABSTRACT

It is commonly assumed that adequate perception of reality is a condition of psychological adjustment. Carl Rogers, for example, holds that ". . .maladjustment is the result of problems in perception of the self and evironment," and similar statements appear in the writings of Bartley, Henry, Maslow, and Freud, among others.

This assumption is understandable in the light of the clinician's experience with the hallucinations and delusions of the extremely disoriented, and studies of the perception of physical objects and of body image lend support to this belief: the maladjusted do not perceive these objects as accurately as do the adjusted. However, studies of the perception of the self and others do not point to any such clear conc lusion.

Further, the relative accuracy of the adjusted and maladjusted perception of the social world is a neglected field of study.

A 40-item test of the perception of "social reality" has been developed that permits scoring of the accuracy of estimate of the social behavior of others.

When accuracy scores are correlated with two criteria of adjustment-maladjustment - hospitalization for psychiatric disorder vs. non-hospitalization and MMPI indices - no significant association is found for either criterion. "Healthy people" see the social world as accurately, and as inaccurately, as unhealthy persons.

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CHAPTER I

SOME THEORIES OF KNOWLEDGE

Although the problem of perceptual accuracy appears at first to be one which falls solely within the domain of psychology, this may not be the case. Social philosophers and sociologists have pointed out that individuals have perspectives which derive from their positions in society and which distort or limit their perception, particularly their perception of the social world. Francis Bacon was the first of a series of thinkers who sought to explain bias, error, illusion, and superstition by their social origin. In his attempt to derive a method that would provide objective knowledge, Bacon came to the conclusion that everyday perception would not lead to such knowledge. The sources of the greatest distortion were the "Idols of the Market Place" which were biases resulting from social interaction.

Especially distorting was man's use of language and the consequent tendency to substitute words for ideas. Because of this distortion, objective perception and knowledge were possible only if one could remove from the processes of rational thought the obstructions which arise out of social intercourse. "For him (Bacon) the cloudy thinking capacity of man attains knowledge only where there is a constant alertness to the falsification of experience by the idols, and when the intimate, immediate commerce of the senses with external nature is rigorously subjected to the inductive method."[1]

The trend of thought initiated by Bacon was accepted by succeeding generations of philosophers and for several centuries remained

relatively unaltered. It became central to the thought of the French philosophes and ideologues. According to the philosophes, social structures were edifices of prejudice, bias, and error. Social structures having their basis in expediency, interest, and passion became the instruments of exploitation and the repositories of the past stupidities of mankind. The ideologues took up this view of society and its institutions as the chief sources of human error. They hoped that, by showing how institutional structures arose and by revealing their foundations, they could build on that base a rational collective existence.

All of the above thinkers envisioned a sphere of absolute truth detached from the social realm. Auguste Comte altered slightly this traditional belief. His "Law of the Three Stages" formulates a relationship between the form of society and the perceptual and conceptual processes manifested in that society. Having noted that different thought forms obtain when social structure differs (e.g., theological thought in ancient and primitive society; metaphysical thought in feudal society; and scientific or positivistic thought in industrial society), Comte asserted that objective knowledge was possible only in the positivistic stage when thought would, presumably, be liberated from its social dependence.

Marx and Engels built upon the Comptean notion that thought is socially dependent and attempted to specify the social factors that condition knowledge. The conclusion they reached was that

> . . . the mode of production in material life determines the general character of the social, political, and spiritual processes of life. It is not the consciousness of men that

> determines their existence, but, on the contrary, their existence determines their consciousness.[2]
>
> . . . Man's consciousness changes with every change in the conditions of his material existence in his social relations and in his social life.[3]

Not only does the mode of production in the material life determine the political, social, and spiritual processes of life, according to Marxian theory, but also, these material factors, particularly economic interests, act as distorting prisms. The perspectives, imposed as a result of membership in a particular economic class lead to ideologies. All ideological conceptions are disortions. By ideology Marx meant the ideas and representations advanced by an individual or group which are more or less conscious disguises of the real nature of a situation, the true recognition of which would not accord with his interests. In Marxian thought, the ruling class is most susceptible to this form of bias because perpetuation of their ideology is a means of maintaining their favored position. Being the dominant group, the ruling class's ideas, supposedly, permeate the thought of all other classes and as a consequence distort it, as well.

Marx's solution to the problem of distortion was, like his solution to most problems, the advent of communism. With the introduction of communism all class distinctions would be eliminated and hence, class perspectives, which are the ones of prime consequence, would be eliminated. Supposedly, accurate perception and objective knowledge would then obtain.

Max Weber gave the sociology of knowledge a slightly different slant. Whereas Marx held that socially determined perspectives led

to distortions in perception and ideas, Weber proposed that bias was not necessarily distorting. A special perspective could lead to fruitful perception. In this comparative studies of religion, Weber tried to demonstrate that the particular orientations stemming from the ethical systems of the world's religions either made possible or inhibited the development of certain systems of thought and certain behavioral systems. Specifically, he held that the orientation resulting from the ethical system of Christian Protestantism, particularly its ascetic branches, was a necessary factor in the development of science and capitalism. Under no other ethical system was such a development possible. This, of course, carries with it no implication that the Protestant orientation was correct while the orientations of Hinduism, Confucianism, and Taoism were incorrect, nor does it imply that the Protestant ethos made possible more objective perception and thought. The different orientations of the world's religions simply brought about different results.

The sociologists Emile Durkheim, George Herbert Mead, and Max Scheler likewise regarded all perception and thought as arising in the social process and being conditioned by it; indeed, thought could not be independent of social life. It is only through the language, the frames of reference, and the categories of thought provided by society that one can think and perceive. In addition, society provides the necessary guidance and impetus to perception and thought. Though they did not conceive of absolute and objective knowledge apart from the situation in which it arose, they did recognize that different cultures and social situations resulted in differential perception and thought.

The sociology of knowledge reaches its fullest expression in the work of Karl Mannheim. Mannheim recognized as did Marx, Weber, Durkheim, Mead, and Scheler that socially produced tools were necessary for thought and perception, but at the same time he differed from all but Marx in viewing social factors as possible distorting influences as well. There is in Marx's sociology of knowledge an implication that because of class interests and economic concerns, deliberate distortions of thought and perception occur. Unlike Marx, Mannheim was ". . . concerned not so much with distortions due to deliberate effort to deceive as with the varying ways in which objects present themselves to the subject according to the differences in social setting. Thus, mental structures are inevitably differently formed in different social and historical settings."[4] He was concerned then with the relation of mental productions to their social setting as well as the possible distortion resulting from that relationship.

"Out of the possible data of experience every concept combines within itself only that which, in the light of the investigator's interests, it is essential to grasp and incorporate."[5] This is by no means a conscious process but rather the product of his perspective (". . . the manner in which one views an object, what one perceives in it, and how one construes it in his thinking")[6] which is the outcome of language, the social situation, and one's position in the social setting. The different trends of thought which arise from differences in perspective are by no means of equal value, that is, some are more important and some are more valid.

Since much of man's knowledge is perspectival, the objectivity and validity of mental productions become questionable. (Comte, Marx, Durkheim, and Mannheim except science from this relativism.) Mannheim proposes several ways in which this relativistic impasse might be resolved. A detached perspective can reveal distortions and a detached perspective is possible when ". . . a member of a group leaves his social position", (as in cases of vertical mobility), when ". . . the basis of existence of a whole group shifts in relation to its traditional norms and institutions", (as in situations of social change), and when ". . . within the same society two or more socially determined modes of interpretation come into conflict and, in criticizing one another, render one another transparent and establish perspectives with reference to each other"[7] (as in horizontal mobility).

More objective knowledge can be attained in two other ways, according to Mannheim, - "through particularism" and "through relationism". "Particularism" involves making explicit the existential basis of thought and relating particular mental productions to the mode of interpreting the world which gave rise to them. The second approach to objectivity, "relationism", involves bringing together and comparing the particularized ideas of many different streams of thought. Mannheim saw the intelligensia, who because of their education are loosely rooted in society, as being best able to perform the operation of relationism. Their detachment from the mainstream of society allows the degree of aloofness needed in the elimination of distortion in perception and thought.

Although the thinkers discussed above are not unanimous in their view of the effects of social factors and interpersonal relations

on perception and thought, they do agree that society by means of its norms, roles, values, frames of reference, language, and categories of thought mediates between the individual and the object of his perception, i.e., that which is "out there". Most philosophers and sociologists agree that perception and thought, particularly the latter, are contingent upon the devices and techniques with which the individual is equipped by society. Certainly, only very limited perceptual processes occur without these societal tools.

There is also agreement among students of the sociology of knowledge that different societal settings result in different mental productions. In other words, the social setting underlying an individual's mental productions produces a bias which affects what he sees in the world out there. However, although there is agreement on this point, there is disagreement as to whether this bias is always distorting. Mannheim, Marx, and the classical philosophers of knowledge lean towards the view that the social realm creates distortion, whereas Weber, Mead, Durkheim, and Scheler do not.

Just as these theorists differ in their views as to the role of the social in perception and thought, so do they differ in their views as to how we might achieve objectivity. Those sociologists of knowledge and allied philosophers who view social factors as distorting suggest various means of eliminating bias while those who do not conceive of the social as distorting see objectivity as consisting of referring the mental productions in question back to the social process or institutional structure from whence they came. For this latter group the question of objectivity and validity is relative only to the

particular social situation, that is, for them there is no absolute truth separated from the social setting.

Skepticism about the validity and objectivity of thought and perception is greatest when the mental productions being considered are concerned with the social realm. Bacon did not even consider the possibility of perceiving and thinking about social occurrences objectively - to him it was an impossibility. The later thinkers were more optimistic in this regard. For the most part, however, they were of the opinion that objective, non-relative perception and knowledge of society was attainable in some degree only through the use of the scientific method.

Since it is the perception and thought of people generally, rather than that of scientific personnel with which we are concerned the extensive literature on science and objectivity is not here at issue.

If perception and thought are distorted by social factors and if we wish to acquire objective knowledge, how do we go about it? Through the scientific method perhaps, but it is an approach limited to a very few specially trained individuals and is even then subject to some debate as the literature reveals. Gunnar Myrdal[8] suggests that all we can really do is make explicit our biases and that though this will not eliminate them, it will make us aware of them. This approach leaves us in a quandary with regard to the matter of unconscious biases of which there are many.

Another possible approach to objectivity is set out by George Lundberg:[9] objectivity is that state of affairs in which our ways of

perceiving and responding can be corroborated by others. Although this may be a useful approach in some cases, it must be pointed out that many of our biases are collective and we, therefore, share our distortions.

In regard to collective distortions, Ichheiser has this to say:

> . . . our conceptions about social reality are determined by two sets of factors: on the one hand, by the individual experiences we have in the course of our lives . . . and, on the other hand, by ideas which we simply take over from other people in imitating them and learning from them.
>
> [In addition,] not only our ideas and conceptions but even our perceptions and experiences are influenced by cultural patterns and social frames of reference. We perceive, we 'experience,' often only those facts, or only those aspects of social reality, which fit into the scheme of our socially and culturally preformed and prepared dispositions of perceiving (or not perceiving), of having (or not having) certain experiences. What lies outside or beyond this preformed and prepared scheme often does not penetrate the field of potential experiences.
>
> . . . . . .
>
> . . . [Collective misinterpretations may be likened to paranoia.] The only difference between them is that [the former is a collective form of the latter]. The practical consequences of this difference are, of course, enormous, for whereas a person who is posessed by an individual paranoia is considered insane, the person who shares a collective paranoia is considered to be normal within his group. It is the man rather who does not share the collective paranoia of his group, or his culture, or his epoch who is in danger of being considered, or even of really becoming, insane.[10]

A more pragmatic approach than any of the above is possible. It holds that, if our perceptions and ideas are useful (instrumental) in our everyday affairs, we need not concern ourselves with their objectivity and validity.

Whether or not philosophers and sociologists of knowledge have given us answers as to how to achieve objectivity, some have hypothesized that certain socio-personal positions might reduce the distortions

and limitations upon knowledge that result from social participation. Some of these suggestions are:

1.) Bias may be fruitful as well as distorting. Weber's studies in religion indicate that shared biases are not necessarily distorting. Mannheim seems to suggest the same thing when he says in regard to social science that

> In order to work in the social sciences one must participate in the social process, but this participation in collective-unconscious striving in no wise signifies that the persons participating in it falsify the facts or see them incorrectly. Indeed, on the contrary, participation in the living context of social life is a presupposition of the understanding of the inner nature of this living context. The type of participation which the thinker enjoys determines how he shall formulate his problems. The disregard of qualitative elements and the complete restraint of the will does not constitute objectivity but is instead the negation of the essential quality of the object.
>
> But, at the same time, the reverse - the greater the bias, the greater the objectivity - is not true.[11]

According to this statement then, bias may be <u>either</u> fruitful or distorting.

2.) Social biases may not be shared equally by all and, therefore, some may perceive and think more accurately because their mental framework is not wholly permeated by distorting biases. Marx and Mannheim (particularly Mannheim) suggest that those men who somehow escape total immersion in their social field (those who are alienated, detached, marginal, vertically and horizontally mobile, and perhaps, only quasi-socialized) may be better able to see that "the emperor is without clothes." This same possibility is mentioned by Stonequist[12] in his study of the marginal man. Ichheiser says this also but in stronger terms:

> . . . Since it is obviously a basic fact that the range of our psychological insight is always limited in scope; since we tend to misinterpret what we are unable to understand because

> it lies beyond the threshold of our comprehension; since we are trying, by an unconscious defense mechanism, to overcome our perplexity in the face of our disagreements and to maintain our belief that it is we and not others, who see the things 'as they really are', it is clear that, of all types of people, the one most likely to avoid this kind of misinterpretation is the type of personality which contains within its own makeup as many diverse potentialities as possible . . . [This] is the 'marginal man' who, split within himself is fully aware that the world is not as 'we' see it but that 'we' see it as we do because we are as we are.[13]

There is at least some empirical evidence to support the hypothesis that it is the detached who may be able to achieve some degree of objectivity. Studies in creativity conducted at the Institute of Personality Assessment and Research of the University of California indicate that creative individuals - ones whose ideas are original, fruitful, and often revolutionary and who are at least in some degree detached from the everyday commerce of society - have perceptual biases (preferences for disorder, irregularity, and complexity) that are the reverse of those found in the general population and that are productive of significant insight about reality (both social and non-social).[14] This would seem to indicate that detachment and non-distorting, productive bias may in some cases go hand-in-hand.

The foregoing observations and suggestions concerning perception and thought and the achievement of objectivity or accuracy have a long and extensive history in the literature of philosophy and sociology, but psychologists and psychiatrists, apparently unaware of this literature, have proceeded to equate the norm of "being regular" (the norm of "being healthy", i.e.; free from certain forms of psychogenic symptom) with the value of greater accuracy of perception, especially social perception. Psychologists and psychiatrists should, at least,

have been cautioned by the observations in the philosophy and the sociology of knowledge. In the psychological literature perceptual and cognitive acuity are often equated with mental health and, in a parallel fashion, inaccurate perception and thought are equated with maladjustment and mental illness.

According to Rogers ". . . maladjustment is the result of problems of perception of the self and environment"[15] and his client-centered therapy is primarily an attempt to help the individual see things differently. Maslow holds a similar view - "The neurotic is not only emotionally sick - he is cognitively wrong!"[16] The anthropologist, Jules Henry, says "In our culture a 'neurotic' cannot measure 'reality'."[17] In Principles of Perception Bartley agrees that ". . . much of what we now recognize as anomalous behavior is or is based upon anomalous perceptual processes."[18] The statement that "Correct perception of reality (including, of course, the self) may serve as another useful criterion of mental health"[19] is a corollary of Bartley's position.

Finally, even Sigmund Freud expressed concern with psychopathology as it relates to man's relation to reality and his perception of it - "Neurosis does not deny the existence of reality, it merely tries to ignore it; psychosis denies it and tries to substitute something else for it. A reaction which combines features of both of these is the one we call normal or 'healthy'; it denies reality as little as neurosis, but, like a psychosis, is concerned with effecting change in it."[20]

The following chapter will examine the factors which led to the maladjustment-equals-inaccurate-perception assumption. It will,

in addition, examine whether there is any basis for saying that the ability of the maladjusted to perceive reality is impaired.

FOOTNOTES

[1]S. Taylor, Conceptions of Institutions and the Theory of Knowledge (New York: Bookman Associates, 1956), p. 16.

[2]Marx and Engels: Basic Writings on Politics and Philosophy, (ed.), L. S. Feuer (Anchor Books; Garden City: Doubleday and Company, Inc., 1959), p. 43.

[3]Ibid., p. 26.

[4]K. Mannheim, Ideology and Utopia (Harvest Books; New York: Harcourt, Brace and Company, 1959), p. 265.

[5]Ibid., pp. 273-74.

[6]Ibid., p. 272.

[7]Ibid., p. 282.

[8]G. Myrdal, An American Dilemma (New York: Harper and Brothers Publishers, 1944), p. 1043.

[9]G. A. Lundberg, Social Research (New York: Longman's, Green and Co., 1942), p. 90.

[10]G. Ichheiser, "Misunderstandings in Human relations," The American Journal of Sociology, LV (September, 1949), pp. 24-25.

[11]Mannheim, op. cit., p. 46.

[12]E. Stonequist, Marginal Man (New York: Russel and Russell, Inc., 1961), p. 155.

[13]Ichheiser, op. cit., p. 41.

[14]F. Barron, "The Psychology of Imagination," Scientific American, CXCIX (September, 1958), pp. 151-66.

[15]C. R. Rogers and R. F. Dymond, Psychotherapy and Personality Change (Chicago: The University of Chicago Press, 1954), p. 307.

[16]A. H. Maslow, Motivation and Personality (New York: Harper and Brothers, 1954), p. 204.

[17]J. Henry, Culture Against Man (New York: Random House Inc., 1963), p. 171.

[18]N. S. Bartley, Principles of Perception (New York: Harper and Brothers Publishers, 1958), p. 465.

[19] M. Johoda, Current Concepts of Positive Mental Health (Joint Commission on Mental Illness and Health Monograph Series; New York: Basic Books, Inc., 1958), p. 50.

[20] S. Freud, cited in A. P. Noyes, Modern Clinical Psychiatry (Philadelphia: W. B. Saunders Company, 1948), p. 272.

CHAPTER II

PREVIOUS RESEARCH ON THE RELATIONSHIP BETWEEN PERCEPTUAL ACUITY AND ADJUSTMENT

The conflict between the philosophical-sociological view, that total immersion in the social field may lead to distortion in perception and thought, and the popular psychological view, that immersion in and conformity with society and its norms may be requisite to accurate perception, leads one to the inevitable question of whether the equation of maladjustment (a form of detachment) and perceptual inaccuracy is supported by research. Consideration of this problem is, perhaps, facilitated by a division of the subject into four sections: perception of one's body image, perception of one's self image, perception of others, and perception of reality in general.

PERCEPTION OF ONE'S BODY

In reviewing the literature on body boundary concept Fisher notes that with increasing body boundary definiteness there is a diminished likelihood of psychosis and an enhanced ability to deal effectively with difficult, disturbing experiences. Tests to determine definiteness of body boundary can distinguish schizophrenics from normals and neurotics, the boundary for schizophrenics being vague and indeterminate. Shifts in the definiteness of body boundary are detected as schizophrenics recover from disorganization. They are, in other words, better able to distinguish perceptions of the self from the non-self. Fisher points out that "at this point one can only conjecture whether boundary fluctuations represent initiating forces in change processes or whether they are subsidiary effects.[2]

Weckowicz and Sommer[3] found that schizophrenics perceive distal parts of the body (e.g.; their feet) as smaller than do normals and non-schizophrenic patients. This inaccuracy of perception may be attributed to either of two sources.

1.) There may be a narrowing of self-boundary with distal parts of the body being less ego-involved and therefore less valued.

2.) Abnormalities in body image may be due to a breakdown of size constancy and distortions in perceptions of space.

The latter view has implications for not only the perception of the body but also for perception generally.

In the opinion of these authors distortion of body image is particularly significant because . . .

> A very important aspect of the self is its boundary. . . .The definition of self boundary depends on the structuring of relations with early social objects. It allows the individual to see himself from the vantage point of the other without loosing his identity and is thus important in bringing about a well defined and clearly delineated self.[4]

This being the case it is likely that where distortion of body image occurs distortion of self image will also occur.

PERCEPTION OF ONE'S SELF

Research techniques used to investigate self image involve either a comparison between the self (the picture the individual has of himself) and the ideal self (the picture the individual has of how he would like to be) or between the self as seen by the individual and by others. Studies using the former method will be discussed first.

According to Hanlon <u>et al.</u>,[5] the correlation between self-ideal self congruence and total adjustment is positive and highly significant.

A later study[6] found that neurotics not only do not measure up to their self-deals but also see themselves as inferior to the average person. Chase[7] found that psychotics in general and paranoid schizophrenics in particular have a significantly lower correlation between their self-concept and ideal self-concept than normals.

Studies in which the findings are opposed to those cited above are also available. Ibelle[8] found that the self-ideal self discrepancy for normals and paranoid schizophrenics was not significantly different. Friedman[9] drew the same conclusions concerning a similar sample. Using a different technique Rogers[10] had subjects rate their own overlap between self and ideal self. In this case not only was there no greater correspondence in self-ideal self concepts but paranoid schizophrenics were found to have a significantly higher self-ideal self congruence than normals. Rogers, however, qualifies this by saying that his technique tapped a gross level of personality where defensiveness could easily be employed by the schizophenic. The same possibility was suggested in a study cited earlier.

> By implication we would have expected the schizophrenics to possess the least effective adjustmental patterns. Their high self - ratings are probably the result of defensive distortion.
>
> . . . . . .
>
> On the ideal the psychotic subject has a significantly lower aspiration level than the normal. This lowering of the ideal self could be an extension of the defensive distortion of the self concept. This defensive combination, distortion of self - appraisal and lowering of ideal self, enables the schizophrenic to enhance himself relative to his ideal and to avoid anxiety arising from a discrepancy in the self.[11]

Obviously, it is impossible to determine from available research whether the "mentally ill" person does have an inadequate self concept. Research by Achenbach and Zigler, and Phillips and Zigler may clarify the confused picture. Individuals high on social competence (personal maturity) were more likely to be diagnosed as manic-depressive or psychoneurotic than schizophrenic or suffering from character disorder.[12] Mental patients of high social competence showed greater disparity between self and ideal self than patients of low social competence.[13] These two findings taken together point to the possibility that the disparity between self and ideal self is more likely to be found in particular groups of maladjusted individuals rather than in maladjusted persons generally. Hillson and Worchel's[14] finding of self-ideal self discrepancy in psychoneurotics but not in schizophrenics is consistent with this view. As they suggest this phenomenon may be the result of the defense mechanisms employed by the specific psychiatric group - the degree of social maturity determines the defense mechanisms which in turn determines the self-ideal self congruence.

A related question is that of the significance of a discrepancy between the self as seen by the individual and as seen by others. Research in this vein has been done by Calvin and Holzman.[15] They found that (a) the tendency to enhance the self is inversely related to maladjustement, the more poorly adjusted the individual the more self depreciative he is; (b) individuals who manifest poor insight regarding their own level of adjustment are more likely to be maladjusted than those who show good insight. This reflects a certain degree of inaccuracy of perception of the self, however, the sample used was college students and not mentally ill persons.

The above observations are tempered somewhat by a statement by Block and Thomas:

> It is granted that to admit extreme dissatisfaction with one's self is indicative of maladjustment. But are individuals expressing extreme self-satisfaction to be considered as representative of an optimal level of personality integration when this self-satisfcation is based upon repressive mechanisms?[16]

PERCEPTION OF OTHERS

Some studies of the perception of others have been concerned with the perception of normalcy and the perception of the "average-other" person.

Both adjusted and maladjusted subjects in Chase's[17] study held similar conceptions of the average-other person. Subsequently, this finding was replicated by Fagan and Guthrie. This study concludes that "correlation between self and average person sorts [using Q-sorts] for each person indicate that these schizophrenics do perceive their discrepancy from what they perceive to be normal. As with neurotics, schizophrenics differ most, not in their conception of the average other, but in their perception of themselves."[18] High anxious subjects also perceive themselves as different from others.[19]

When asked to do an MMPI as a well person would, a group of psychiatric patients could not produce a normal performance but rather changed the degree of severity or nature of the behavior disorder.[20] Although the subjects did not have a clear conception of normalcy, it is significant that these individuals did perceive that they were not normal. Further, they knew in which direction normalcy lay.

Implicit in many conceptions of maladjusted behavior is the notion that the poorly adjusted individual is less able to perceive others accurately and, as a result, is less able to predict their responses. Baker and Sarbin[21] are among the few who have conducted research in this area. They compared the prediction of the characteristics of specific others by non-delinquent, adolescent boys and by delinquent, adolescent boys who were thought to have psychopathic tendencies. The predictions of the non-delinquent boys were no more accurate than those of the delinquents.

In a similar investigation Bieri, Blacharsky, and Reid[22] found no significant relationship between adjustment and predictive accuracy. They did, however, propose that maladjusted individuals would predict differences more accurately while better adjusted individuals would predict similarities more accurately. This hypothesis, incorporated into a study by Chance,[23] was neither refuted nor confirmed.

Taft concluded from a review of research that ability to judge others correlates positively with emotional adjustment. "Presumably the more significant aspect of this correlation is that poor judges tend to be poorly adjusted and therefore probably more likely to allow personal biases to affect their judgments [but] it is possible to argue that a poorly adjusted person who is aware of his emotional difficulties is more sensitive to similar difficulties in others."[24]

In the course of the research projects conducted by the Kinsey Institute, Wardell B. Pomeroy made an observation that is inconsistent with Taft's conclusion that inability to judge others

is a characteristic of poor adjustment. Pomeroy writes:

> One of the discoveries that fits the findings of other researchers is that the more poorly educated in our population are much more acute in discerning unfavorable attitudes than are the better educated. Non-verbal cues are picked up so unerringly by them that we have realized the futility of trying to assume a mantle of neutrality on sexual matters without sincerely believing in this position. We find criminals are the most acute in this regard. This is because their freedom and sometime their very lives have depended on their ability to know friend from foe.[25]

If criminality is viewed as a form of personal maldjustment, as some investigators contend, then Pomeroy's observation contests the idea that perceiving accurately is associated with social adjustment.

PERCEPTION OF REALITY

Study of the comparitive perceptions of reality by psychoneurotics, psychotics, and normal persons has been approached primarily through analysis of responses to physical reality, i.e.; through psychophysical research.

In one instance it was observed that perceptual judgments of lengths of lines, sizes of angles, density of dots, and areas of circles were impaired among schizophrenics, but the author, Chambers,[26] notes that these results might be due to differences in motivation between normals and schizophrenics, not to differences in perceptual ability.

Lovinger "assumed that if schizophrenics considered in poor contact with reality were perceptually in poor contact, they would be less responsive to minimal distance cues."[27] His findings bear this assumption out. "This was interpreted as suggesting that the schizophrenic's break with reality involves not only more complex psychological functions but basic perceptual processes as well."[28]

> Constancy of perception is one of the basic mechanisms of adjustment to the environment. It allows the subject to perceive stable objects in the external world instead of an ever changing flux of stimulation . . . Constancy of perception includes constancy of size. When the distance between an observer and an object changes, size constancy allows him to perceive the object as being within wide limits the same size in spite of the fact that its retinal image varies directly with the distance. . .[29]

Taking this as his departure point Weckowicz measured the ability of chronic schizophrenics (mainly hebephrenic) and normals to judge the differing heights of a rod at different distances. This technique revealed that chronic schizophrenics have diminished size constancy perception.

Raush[30] had on an earlier occasion found the reverse to be true (i.e.; greater size constancy) in early schizophrenia. An explanation for this may be that higher size constancy in early schizophrnia may be an attempt to compensate for disturbance.

In reviewing the literature on size constancy and maladjustment Harway and Salzman[31] found that three investigators[32] in addition to Weckowicz[33] noted underconstancy in size perception while three investigators[34] in addition to Raush[35] noted overconstancy. Harway and Salzman[36] themselves found no difference in size constancy perception between psychotics and normals. Likewise Leibowitz and Pishkin;[37] and Pishkin, Smith, and Leibowitz[38] found no difference in the size constancy perception of schizophrenics and normals.

This review of the literature on the psychophysical judgments of the "mentally ill" is far from exhaustive, but it is representative of the findings.

Perception of the world involves not only the perception of physical reality but also, the perception of social reality. One important aspect of seeing social reality, perception of others, has already been discussed. Seeing social reality also involves seeing the world as threatening or benevolent, as hostile or friendly, as honest or dishonest, as "moral" or "immoral", and so on. Questions concerning one's world view, including one's view of others, are asked on almost every personality inventory. For instance, the Thurstone Temperament Schedule[39] asks, "Do you think most people are self seeking and malicious?" The Humm-Wadsworth Temperament Scale[40] asks, "Do we all demand more respect for our own rights than we give to those of other people?"

Similar items can be found in the California Test of Personality[41] and the MMPI.[42] These instruments make the implicit assumption of social reality is an indicator of adjustment. This assumption is far from confirmed.

The linking of accurate perception of social reality to adequate adjustment has been encouraged by the fact that psychotics, in some cases, are subject to hallucinations and delusions which are, of course, errors in the perception of physical and social reality. However, Hellersberg[43] questions whether people diagnosed as deluded and hallucinatory are always really so. She suggests that in some cases what is called a disturbed sense of social reality may be instead a culturally acquired way of relating to reality which is different from that of the therapist. Even if Hellersberg's suggestion were unfounded, it must be remembered that only a small proportion of those

with adjustment problems are subject to these types of distorted perceptions.

Studies of the accuracy of one's general world view as it relates to adjustment levels are few. Nettler[44] studied the literature concerning the attitudes of delinquents, narcotic addicts, anti-Semites, and fascists (all forms of maladjusted or disapproved behaviors) and compared these attitudes with the evidence concerning the objects of the attitudes. He concluded that in many cases the "bad man" expressed an attitude that was justified by the evidence though the very attitude was considered by psychologists to be a sign of maladjustment. In other words, the disapproved individual was not nearly as incorrect in his world view as he was commonly thought to be. The world he sees is not sweet and clean and lovely, but neither is it totally false.

Another method of testing the accuracy of one's perceptions of his world requires him to predict social events. Supposedly, the accurate perceiver will be the accurate predictor because his predictions are based on correct knowledge of reality. With such an assumption in mind, Nettler[45] made a tally of the predictions reported by Sanford et al.[46] concerning the outcome of World War II. The Sanford study was not concerned with the accuracy of these predictions, but rather with the correlates of optimism and pessimism where optimism was assumed by these investigators to be healthy and pessimism, "sick". For 14 predictions, Nettler scored the pessimists correct seven times, the optimists correct five times, with two predictions indeterminate.

SUMMARY

The following conclusions may be drawn from this review of the literature:

1.) Body image in psychoses (particularly in schizophrenia) is disturbed.

2.) Evidence as to whether self-ideal self discrepancy appears in psychoneuroses and psychoses is inconclusive. At any rate, whether this is, in fact, a measure of incorrect perception of the self is questionable. The self perceived as inadequate may be an accurate perception.

3.) Not enough investigation has been done on the correspondence between the self as judged by the individual and as judged by others to indicate whether neurotics and psychotics are seeing through distorting lenses.

4.) It appears that maladjusted individuals may be fairly accurate in their perception of the generalized other and that they do perceive their own deviation from the norm.

5.) The perception of physical reality by schizophrenics in particular may be inaccurate. However, investigators in this field point out that this may be the result of difficulties in communication or of deficiencies in motivation.

6.) To the extent that maladjusted individuals are subject to hallucinations and delusions, they may be said to be inaccurate perceivers.

7.) Little evidence is available as to whether individuals with adjustment problems have a correct picture of their social environment as a whole.

As a closing note to this overview of adjustment and perception, it seems appropriate to cite once again Barron's study (see p. 11) on creativity. It will be recalled that his findings indicate that contemporary creative individuals - whose ideas are original, fruitful, and often revolutionary - have perceptual biases that are the reverse of those found in the general population and that are productive of significant insights about reality both social and other. In a reflection on creativity and psychological health Barron says,

> The relationship of creativity to psychological health and to peace of mind has long been argued. It was my pleasure recently to participate in a conference on the goals of psychotherapy, in which a number of extremely amiable psychoanalysts, psychiatrists, and psychologists found themselves in considerable agreement about the goals of therapy, and by implication, about the characteristics of a psychologically healthy human being. The traits most commonly mentioned as indicating a state of psychological health were: 1) accuracy of perception of reality, 2) stable body functioning and freedom from psychosomatic disorders, 3) absence of hostility and anxiety, 4) capacity for friendly and cooperative relations with other people, 5) spontaneity and warmth, 6) social responsibility. An excellent combination, I said to myself. However, as I continued to listen in comfort and mild edification, I suddenly realized that my thoughts had drifted off to a description I had recently read of Robert Hooke, the brilliant 17th century scientist whose achievements place him second only to Newton among his contemporaries, and whose prolific originality in invention has remained unsurpassed. Hooke suffered throughout his life from severe headaches, from indigestion so troublesome that he noted gratefully in his journals any meal that happened to agree with him, from giddiness and insomnia, and from fearful dreams during the few hours a day he was able to sleep.
>
> Images of other figures drifted through my mind: the apocalyptic rages of Beethoven, the savage indignation of Jonathan Swift, the terrible loneliness of van Gogh, the criminality of Rimbaud, the shameless preenings of Baudelaire, the stoical despair of Emily Bronte, the excruciating physical and spiritual pain endured by Heine. I felt distinctively uneasy; could it be that these creative people had been in need of psychotheraphy?[47]

Such often-noted disturbance among scientists and artists - people sometimes valued for the accuracy of their observations - calls into question the facile equation of psychic distress and perverted perception of reality.

FOOTNOTES

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[28] Ibid, p. 91.

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CHAPTER III

SOME DEFINITIONS AND A STATEMENT OF HYPOTHESES

The two previous chapters have brought into question the equation of adjustment with perceptual acuity and of maladjustment with perceptual inaccuracy. The present study will not be concerned with all aspects of perception as they have been delineated in the review of the literature. It will instead have a restricted range with the perception of social reality as its focal point. As previously mentioned, perception of social reality involves perception of others, particularly the generalized other, perception of social situations, and perception of the social realm as a whole, that is, one's general world-view. Before proceeding to a statement of the hypotheses which will guide this research, some definitions of adjustment-maladjustment and perception are necessary.

ADJUSTMENT-MALADJUSTMENT

The term maladjustment has in the previous chapters been loosely used to include all forms of deviant behavior - both individual and group-based deviation. As Lindesmith and Strauss point out, individual deviation refers "to behavior labeled as "deviant" or "abnormal" which does not have a cultural base: that is, it is not prescribed as customary by a group"[1], e.g., psychoses and neuroses. On the other hand, group-based deviation refers to behavior that is a matter of group custom where the norms of that group differ from and are often opposed to the norms of the larger society in which that group is located. According to this schema, normal or adjusted behavior would

be that behavior which is consistent with the prescriptions, not only of a particular group, but also with those of the society as a whole. Although the term maladjustment has been used to cover a wide range of deviance, for the purposes of research this is not an entirely satisfactory usage; therefore, an examination of the ways in which "maladjustment", "abnormality" and "deviance" have been used or defined will be helpful for more precise definition.

Maladjustment may be defined statistically. The abnormal or maladjustive may be equated with a strictly quantitative departure from the typical or average. "Most psychological traits are assumed to fall into a 'normal' distribution with most cases in the middle and few at the extremes. These extremes which consitute only a small percentage of the total population are arbitrarily lopped off and labeled 'abnormal' or 'pathological' or 'deviant' and the far larger percentage clustering around the middle are arbitrarily called "normal'."[2]

A number of problems are faced by users of this approach. First, the placement of the cutting points that devide a frequency distribution into normal and abnormal regions is strictly arbitrary and may, therefore, lead to varying degrees of inaccuracy in cutting off those actually maladjusted. Another difficulty arises from the fact that the two extremes of the distribution may not cut off the same kinds of individuals; the poorly adjusted fall at one end whereas the extremely well adjusted fall at the other. Both are abnormal in a sense, though one might be termed subnormal and the other supra-normal. Finally, such a distribution must have some criterion by which individuals are ordered, hence scoring problems arise.

A second approach defines maladjustment as the degree of discomfort felt by an individual. According to this approach, the individual who is depressed, unhappy, anxious, or otherwise troubled is maladjusted. Difficulties arise in the use of this definition as they did with the statistical one. For instance, not all forms of psychological "maladjustment" are accompanied by subjective distress. In addition, the discomfort criterion fails to consider those behaviors called abnormal because of their effect on others. Finally, the discomfort criterion fails to consider that an individual may make an adequate adjustment to this personal discomfiture and still be able to function while another individual with equal discomfort may not be able to do so.

Social nonconformity has been used as a basis for defining maladjustment. An individual is deemed abnormal to the degree that he fails to conform to social standards and expectations. The Lindesmith and Strauss definition referred to earlier is framed in these terms. One difficulty with this type of definition is that of group-based deviance, such as criminality, which is in conformity with the norms of a deviant group. Other difficulties in such a definition arise in connection with extreme conformity, with the cultural innovator, and with the possibility that not all social standards are above being questioned.

A criterion of maladjustment often used in research is exposure to psychiatric treatment either on an outpatient or an inpatient basis. Like any other approach, this too has its drawbacks. On the one hand, psychiatric care may not necessarily mean severe maladjustment, while

on the other hand, despite their nonconforming behavior, many other maladjusted people may not be identified by this treatment criterion.

Another frequently used research criterion of maladjustment involves attempts at the "objective assessment" of psychological symptoms. This is usually accomplished by personality tests. Such tests define abnormality on an objective basis by comparing an individual's test answers with those made by "normals" and by specified psychiatric groups. Because maladjustment has many dimensions, overall scoring is difficult, and the usual questions of reliability and validity arise.

While all the above mentioned approaches have inherent difficulties, the latter two are particularly easy to use in research situations and they make possible a degree of objectivity not readily obtained with the statistical, discomfort, and nonconformity criteria. In addition, the statistical, discomfort, and nonconformity criteria are at least to some degree implicit in psychiatric treatment and personality testing.

For present purposes, therefore, maladjustment will be defined by these two criteria: scores on a popular psychometric test and submission to psychiatric treatment. Discussion of these criteria will continue in the methodological chapter.

PERCEPTION

Like the term maladjustment, the term perception has in the earlier chapters been used very loosely. It has already been mentioned that the range of perception with which the research portions of this paper will be concerned will be restricted.

Definitions of perception show a considerable degree of similarity as the following excerpts demonstrate:

> Perception refers to the ways in which organisms respond to the stimuli picked up by their sense organs.[3]
>
> Perception is the process of discriminating among stimuli and interpreting their meanings. It intervenes between sensory processes on the one hand, and behavior on the other.[4]
>
> Perception is a way of 'sizing up' situations in terms of various things that might be done about them.[5]
>
> To perceive is to become conscious of meaning.[6]

As it has been used in reference to social reality, the term perception encompasses more than that included in the above definitions. One's world view and one's view of others involves not only the picking up of stimuli and the giving of meaning to them but also includes generalizations based on that perception.

Sherif defines concepts as "standardized generalizations - groupings of objects, events, relations, experiences on some general basis which can be used in different specific situations."[7]

Clearly, what has thus far been referred to as "perception of social reality" contains conceptual elements as well as perceptual elements. Because of this conceptual factor and for simplicity's sake, a definition given by Bronfenbrenner has been adopted. "The term perception is used in its broadest sense as signifying the way in which the person structures his world and himself."[8]

HYPOTHESES

With these definitions in mind, this study is concerned with testing the following possibilities:

H_0: The adjusted and maladjusted perceive social reality equally accurately.

H_1: The adjusted individual perceives social reality more accurately than the maladjusted individual.

H_2: The maladjusted individual perceives social reality more accurately than the adjusted individual.

FOOTNOTES

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CHAPTER IV

METHODOLOGY

THE INSTRUMENTS

Measures of Adjustment-Maladjustment

One criterion of maladjustment used here is psychiatric treatment (hospitalization-nonhospitalization). Little discussion of this criterion is needed in that no special instrument or technique is required to measure it. It is worth reiterating, however, that this index commends itself by the fact that it is easily obtained and it embodies, at least to some degree, the discomfort and nonconformity criteria. Further, the treatment criterion is the one most frequently used for research purposes.

Although it would have been possible to use the hospitalization-nonhospitalization dichotomy as the sole criterion of adjustment, using such a criterion assumes that those who manifest problems of adjustment are adequately represented in the hospital and that all those who are hospitalized represent a fair sampling of the problems manifested - a rather tenuous assumption. Compensation for the limitations of the treatment criterion is possible, in part, if another criterion is used. One such measure involves the use of signs obtained from psychometrics. Like the psychiatric treatment criterion, the personality testing criterion is easy to use, is relatively easy to obtain, and contains elements of the statistical, discomfort, and nonconformity criteria.

Granted that some measure of adjustment was needed to cull out the "normal" from the maladjusted, there remained the problem of choosing one specific technique from the many that are available. Three things were required of such an instrument: 1.) It had to be relatively easy to administer, preferably in group form; 2.) It had to be able to make the adjusted maladjusted distinction; and 3.) It had to be of the self-report type. Factors one and three were important considerations in that they facilitate research.

Clinicians who use psychological tests are confronted with the problem of their reliability and validity. For present purposes we need make no greater assumption regarding these attributes of such tests than the practitioner in the field of psychological counselling and psychotherapy makes. That is, individuals are treated in clinics and hospitals at least partly on the basis of their performance on psychometric tests. Such a practice implies that these tests must give some indication of adjustment. In accordance with this reasoning, the Minnesota Multiphasic Personality Inventory has been selected because of its wide use by clinicians and its reported reliabilities and validities. In addition, the MMPI meets the three requirements of this research.

Although these reasons motivated the choice of the MMPI as a measure of adjustment, there are a number of difficulties involved in its use:

1.) The MMPI is said to suffer from problems of response style (e.g., yeasaying and naysaying) and response set (e.g., social desirability).

2.) It is long and time-consuming.

3.) There are limitations imposed by the instrument itself and by the sample on which it was standardized.

Before examining the first difficulty, it is necessary to define the terms "response style" and "response set". "The term 'set' connotes a conscious or unconscious desire on the part of the respondent to answer in such a way as to produce a certain picture of himself. . . . An individual may have a set to dissimulate, to malinger, to appear aggressive, to fake good, to get the job, etc."[1] "'Response style,' [on the other hand], refers to a tendency to select some response category a disproportionate amount of the time independently of item content."[2]

The literature on response style and response set is extensive and by no means conclusive. If any conclusion can be reached it is that the importance of these problems has been somewhat overrated. In addition, these difficulties are found, not only in the MMPI, but also in other personality inventories though projective tests are less affected. Even in projective tests, however, respondents may have a response style and, of course, interpretation of projective test may be influenced by the sets and styles of the interpreter. Furthermore, in the MMPI the factors of response style and set are at least somewhat controlled by the ?, L, F, and K scales.

The second difficulty, the time factor, definitely speaks against its use. If the length of the MMPI was a factor contributing to its greater reliability and validity in comparison with some other measures, then there would be grounds for overlooking this drawback.

This question will be examined later in connection with the discussion of the reliability and validity of the MMPI. Some work has been done on the development of a shortened version of the MMPI but it has been very limited in extent. The shortened version was not used in this research for although three of the four studies relating to the shortened form commended its use (Faulds,[3] Holzberg,[4] and Jorgenson[5]), the shortened version was in each case different. A fourth study by MacDonald,[6] using the same form as Holzberg as well as both group and individual forms, raised serious doubts about the reliability and validity of the short form.

> [The final] limitation of the MMPI pertains to the size and representativeness of the normative sample. The standard scores from which all profile codes are derived are expressed in terms of the performance of the control group of approximately 700 Minneapolis adults tested in the original standardization. Such a normative sample appears quite inadequate when compared, for example, with the nationwide standardization samples employed with many of the ability tests . . . That the norms may vary appreciably in different normal populations is illustrated by the finding that the means obtained by college students are consistently above 50 on some scales.[7]

Since the college population is selected largely on the basis of intelligence, it is likely that college samples differ from the standardization sample on the educational and intellectual levels and this may be a factor accounting for the observed differences.

Research in this areas does not, however, substantiate this hypothesis. Brower[8] found that three scale scores (Hy, Hs, and Pd) correlated significantly with intelligence but the correlations were negative, not positive as would be expected in the light of what Anastasi says in the above quotation. A study by Wexner[9] found one positive correlation between intelligence and paranoia and the only

significant correlation in a study by Winfield[10] was a very low one between intelligence and masculinity-femininity.

Using the educational variable, Hanes found that "although the MMPI is one of the most readable of the available tests, the questions are sensitive to numerous interpretations by a variety of subjects where limited education is a real factor."[11]

It is possible that differences in the MMPI norms for the college samples and the standardization sample are the result of interpretive differences stemming from educational differences, or it may be that the college samples contain more maladjusted people, or they may contain individuals who are more aware of their adjustmental difficulties. Whatever the explanation may be, the fact remains that there are normative differences and these may seriously affect the validity of the MMPI.

In spite of these drawbacks in using the MMPI, it does have some reliability and validity. It is easily used and continues to have a reported clinical value. Despite or, perhaps, because of its length, despite the problems of response set and response style, despite the limitation arising from the standardization sample, the MMPI works.

Although the MMPI measures personality traits such as moods which are in themselves quite unstable, it has moderate reliability coefficients. For six scales (Hs, D, Hy, Pd, Pt, and Ma) Hathaway and McKinley[12] reported test-retest coefficients ranging between .71 and .83 for all scales but Hy for which the coefficient was .57. The researchers used the individual form of the MMPI on normals with a test-retest span ranging from three days to one year.

Both the individual and group forms were used to test normals with a retest period of one week in a reliability study by Cottle.[13] He found that for the twelve standard scales the test-retest coefficients were between .46 and .91 with nine coefficients being above .70 (L=.46, D=.66, Pa=.56).

Test-retest coefficients of .52 to .93 were reported by Holzberg and Alessi[14] using the complete and shortened versions of the twelve standard MMPI scales on a psychiatric sample over a three day retest period. Only three of the coefficients fell below .70 (Pd=.52, Ma=.59, Hs=.67).

Rosen[15] found the test-retest stability coefficients of the standard MMPI scales to range between .80 and .88.

Rather than using the test-retest method to determine reliability, Pichot et al.[16] used the split-half method. The weakest correlations were .63 on the K scale for men and .49 on the Ma scale for women. Most correlations were in the .70's. It is curious to note from this brief review that no one scale or group of scales has consistently low reported reliability.

> [In regards to] validity, a high score on a scale has been found to predict positively the corresponding final clinical diagnosis or estimate in more than 60 per cent of new psychiatric admissions. This percentage is derived from differentiation among various kinds of clinical cases, which is considerably more difficult than mere differentiation of abnormal from normal groups. Even in cases in which a high score is not followed by a corresponding diagnosis, the presence of the trait to an abnormal degree in the symptomatic picture will nearly always be noted.[17]

In spite of this evidence, the general consensus is that the MMPI is better as a general measure of maldjustment than as an instrument for

differential diagnosis. According to Lair and Trapp[18] the MMPI neurotic profile might be of value for research purposes but has limited value for differential diagnosis, and according to Eichmann the MMPI is "overloaded with measures of general maladjustment."[19] Sweetland and Quay conclude that ". . . evidence indicates that the profile should be used mainly to differentiate between the neurotic, psychotic, and normal."[20]

A statement by Cronbach tempers criticism of the MMPI - "One is forced to conclude that analysis of MMPI scores, whether impressionistic or actuarial, is at best a source of hypotheses about diagnosis to be checked by other methods. [However] results on differential diagnosis with questionnaires other than the MMPI have in general been unencouraging, and in recent years the MMPI has displaced all competing questionnaires for this purpose."[21]

In a more empirical vein Ellis[22] found that of 160 studies employing the MMPI, 102 (64%) showed significant diagnostic discriminations while of 339 research studies employing other personality inventories, 188 (55%) showed significant discriminations. Although it may be concluded from these results that the MMPI may be more valid for group discrimination than the average inventory, its absolute validity remains in doubt. "Assuming that the MMPI has some fair degree of validity for distinguishing one kind of group from another, the efficacy of its use for individual diagnosis still remains to be proved."[23]

Its length would further militate against its use, although it may be that it is the length of the MMPI which makes it more reliable than other personality tests.

This brief review indicates that the MMPI leaves much to be desired but, at the same time, it is probably one of the best non-projective tests available, and it is certainly one of the most popular personality inventories.

Although it has been necessary to consider the difficulties involved in using the MMPI, for the purposes of this research these factors are not crucial. The concern here is to test a conventional psychological assumption with some of the instruments used by the clinicians who themselves make the assumptions.

A Measure of Social Reality

It is significant that students concerned with the relationship of man to his social reality as a mark of his psychic health have not developed tests of that social world.

A 40-item test has been developed to ascertain how accurately respondents perceive the behaviors of people in everyday life. This questionnaire covers the gamut of human behavior (see Appendix I) - religious, sexual, criminal, altruistic, and economic. A restriction on the choice of indicators of social reality resulted from the fact that information concerning the actual frequency of occurrence of such events in everyday life was needed in order to make scoring for accuracy possible. For each item included in the questionnaire it was necessary that there be available at least some indication of the most accurate response (see Appendix II). Items were revised for readability and clarity on the basis of a pretest on a sample of university students and public school teachers.

In addition to items concerning social reality, the final questionnaire includes questions concerning personal attributes - sex, age, education, occupation, ethnicity, and marital status. Of these variables, education is perhaps the most important because of the possibility that accurate response to the questionnaire items could be a product of information and knowledge rather than of other determinants of accurate perception. The possibility that accuracy of perception might be related to the other personal attributes than adjustment - maladjustment also requires consideration. This, then, is the primary reason for the inclusion of personal data.

THE SAMPLE

The sample is a nonprobability, purposive one selected partly on the basis of educational level. It includes individuals who were hospitalized in a mental institution as well as individuals who were not. Strictly pragmatic reasons lay behind the decision to use a nonprobability sample rather than a probability one. Not the least of these reasons was the possibility of group administration of the instruments. Another consideration was the fact that a local probability sample would in no way increase the generalizability of the results. Furthermore the sample, no matter how carefully drawn, would automatically include bias because certain minimal reading and comprehension skills were required in order that the respondents be able to complete the research instruments.

Because of the nature of the perception questionnaire, it was essential that some controls for education be introduced. Furthermore, although a pilot study indicated that the adjusted could

perceive no better than the maladjusted and that they might even be less accurate perceivers, the respondents in the pilot study included only teachers and university students. Biases, particularly educational ones, may have been introduced in the pilot study as a result of the type of respondent. Controls for education were, therefore, of some import. The final sample, because of these considerations, includes several educational levels.

Included also in the sample are a number of individuals hospitalized in a provincial mental institution. The inclusion of this group allow for the use of hospitalization (treatment) as one criterion of adjustment-maladjustment. It also allows for consideration of the possibility that the relationship between maladjustment and misperception may appear only in cases severe enough to be hospitalized.

The total sample includes 139 individuals, 48 of whom are female and 91 male. Of these respondents, 36 were from the Alberta Hospital in Ponoka, Alberta. This hospital is a mental hospital with a patient population that averages 1,200. It serves the southern portion of the province and it is operated by the provincial government. The wards from which the respondents were drawn were active treatment, admission wards, and included all diagnostic groups.

A second group of respondents were members of a class in social psychology during the 1965 Summer Session at the University of Alberta, Edmonton. Of this group of 57 subjects, 21 were females and 36 were male.

Respondents in the third group, composed of 31 individuals, were men. Individuals in this group were taking grade eight, nine,

ten, and eleven courses in an academic upgrading scheme sponsored by the Canadian Vocational Training Program at the Northern Alberta Institute of Technology during the summer of 1965. They were chosen to provide an educational balance to the University Summer Session group and thereby to bring the nonhospitalized group into closer correspondence with the hospitalized one.

The final group of people tested in connection with this research was drawn from a lower-middle class women's club, The Canadian Daughters' League. Twelve members of the club as well as three of their spouses volunteered to complete the questionnaires. Since these women comprised an educational group with less than high school education, it was thought that they would further balance the educational character of the nonhospitalized portion of the sample. Tables 4:1 to 4:7 give some of the characteristics of the sample.

ADMINISTRATION OF THE INSTRUMENTS

The research instruments were administered in group sessions to all respondents with the exception of the members of the women's club who were allowed to take home the materials and return them to the researcher by mail. The respondents were allowed as much time as they needed to complete the instruments. This varied from one to three hours. All respondents were assured of their anonymity. Such an assurance was most important in the hospital setting where patients were concerned lest their responses be made known to the staff. Hopefully, the assurance of anonymity was sufficient motivation for the subjects to give honest responses.

TABLE 4:1. - The composition of the sample according to its source, sex composition, and MMPI adjustment[a]

Source	Total Males	Adjusted Males	Maladjusted Males	Total Females	Adjusted Females	Maladjusted Females	Total
Hospital	21	2	19	15	2	13	36
University	36	30	6	21	18	3	57
Women's Club and Spouses	3	2	1	12	9	3	15
Northern Alberta Institute of Technology	31	18	13				
TOTAL	91			48			N=139

[a]See pp. 55-56 for discussion of MMPI scoring

TABLE 4:2. - Sex distribution by treatment criterion of adjustment

Treatment Criterion		Sex	
		Males	female
non-hospitalized	70	33	103
hospitalized	21	15	36
TOTAL	91	48	139

TABLE 4:3. - Age distribution by treatment criterion of adjustment

Treatment Criterion	Age						
	15-19	20-29	30-39	40-49	50-59	60+	
non-hospitalized	6	56	19	16	5	0	102
hospitalized	3	10	11	10	1	1	36
TOTAL	9	66	30	26	6	1	138

TABLE 4:4. - Educational distribution by treatment criterion of adjustment

Treatment Criterion	Years of Education: 8 or less	9-12	13-16	17+	Total
non-hospitalized	6	34	46	16	102
hospitalized	10	20	4	1	35
TOTAL	16	54	50	17	137

TABLE 4:5. - Occupational status[a] distribution by treatment criterion of adjustment

Treatment Criterion	2	3	4	5	6	7	Total
non-hospitalized	55	5	2	12	14	7	95
hospitalized	2	1	1	8	9	4	25
TOTAL	57	6	3	20	23	11	120

[a]Classification of occupational status according to B. R. Blishen, "Construction and Use of an Occupational Class Scale," Canadian Society, (ed.) Blishen, et al., (revised edition, Toronto: MacMillan of Canada, 1964), pp. 453-57.

TABLE 4:6. - Ethnic distribution by treatment criterion of adjustment.

Treatment Criterion	Ethnicity								
	English Irish Scottish	German	Ukrainian	Scandinavian	French	Dutch	Jewish	Other	Total
non-hospitalized	48	10	5	9	10	5	1	14	102
hospitalized	22	2	1	6	1	1	0	2	35
TOTAL	70	12	6	15	11	6	1	16	137

TABLE 4:7. - Marital status distribution by treatment criterion of adjustment

Treatment Criterion	Marital Status						
	Single	Married 1st time	Remarried Widowed	Separated	Divorced	Widowed	Total
non-hospitalized	36	60	1	2	2	1	102
hospitalized	12	13	2	3	3	2	35
TOTAL	48	73	3	5	5	3	137

The MMPI was administered under the standard instructions for the group form. In addition to reading the instructions, the respondents were given detailed verbal instructions on how to proceed, including samples of how to respond to items.

Instructions for the measure of social reality, "Prediction of Human Behavior Questionnaire," were as follows:

> Numerous studies have been conducted in Canada and the United States to determine how people behave in a variety of situations. Even though you might not behave as does the majority of individuals in these various situations, we are interested in your views of how others act.
> In the following instances, please examine the various possibilities and indicate which one you think best reflects how people behave by placing the letter of the correct response in the appropriate space in the answer sheet. Please make no marks on the Questionnaire itself.
> Your answers are anonymous. Please do not write your name on any of the pages.[24]

Again, the respondents not only read the instructions but also were given detailed verbal directions with examples of how to proceed. Patients in the mental hospital were given slightly different instructions in that they were told to circle the alternative of their choice and were not given an answer sheet.

Although the directions given were rather detailed, the researcher also attempted to reduce errors by going to each respondent individually and checking for difficulties. In spite of these precautions, there were some responses which had to be discarded because the questionnaires were not properly completed. Upon completion of the instruments each respondent placed his answers in a blank envelope which he then sealed.

THE SCORING OF THE INSTRUMENTS

The MMPI's were scored using the standard group keys and following the instructions provided in the manual.[25] They were then interpreted

using the MMPI Atlas[26] and Kleinmuntz' rules[27] for college maladjustment. Although these interpretive guides yield classifications of respondents in terms of specific diagnostic categories, for the purposes of this research respondents were simply classified as adjusted or maladjusted. That is, individuals who might fall into distinct diagnostic categories such as schizophrenic, or paranoid, or psychopathic were all simply called maladjusted.

Scoring of the perception questionnaire was a considerably more complex proceedure than scoring the MMPI. As was indicated earlier, only those items about social reality for which evidence is available appear in the final questionnaire.

Three scores were obtained for each individual. The first and simplest score was a crude accuracy score. This was derived by counting the number of correct responses given by each individual.

e.g., 5. What percentage of Canadians would you estimate do not believe in God?

a) 50%
b) 25%
c) 10%
d) 5%
e) less than 5%

If in the above example the respondent chose "e" he was given a score of one, any other response was given a zero. According to this method, the individual with the highest score was considered the most accurate perceiver. Possible Scores ranged from 0 to 40.

The above type of scoring does not consider degrees of correctness. For example, if individual X marked "d" as the correct alternative while individual Y marked "b", the crude accuracy score made no distinction between them although X was more accurate than Y. The

second type of score - called approximation-to-accuracy - corrected for this distinction. Under this method of scoring the most accurate response was given a score of one. Looking at the above example, an "a" response was given a score of five, a "b" four, a "c" three, a "d" two, and an "e" one. The weights for each item were added for a total score. Total scores were not used as interval data but were used only to rank individuals. Scoring in this manner meant that the lowest scores were the most accurate. Because of the nature of some items, they could not be scored for approximation-to-accuracy. An example is item 13:

13. "Most people have babies because they like them and want them."

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

In this case there was first of all difficulty in meaningfully scoring the "I don't know" response, and secondly, the small number of alternative responses eliminated the possibility of having several degrees of accuracy. The total approximation-to-accuracy score was, therefore, based only on the 22 items which were phrased in the manner of item five used in the example above. Possible scores, then, range from 22 (accurate) to 112 (inaccurate).

Another method of scoring was designed to yield an optimism-pessimism score. Because the correct responses to many items - such as the ones on theft, and sexual behavior - are ones which indicate that human behavior is not particularly "good", or "moral", or altruistic, it was thought that accuracy in answering the questionnaire could possibly be the product of a generalized pessimistic

attitude rather than a product of accurate perception. It was possible to check for this possibility by deriving an optimism-pessimism score. This was arrived at by assigning weights to item alternatives. For example:

8. What proportion of people have stolen something since they were age sixteen?

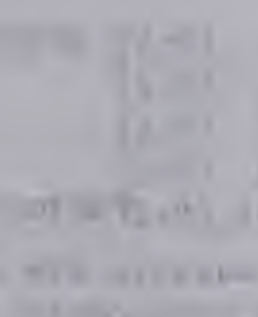
pessimism ↑	5-a)	100%
	4-b)	90%
	3-c)	75%
	2-d)	50%
optimism ↓	1-e)	25%

The optimism-pessimism scores for each item were then totaled to give a score by which respondents could be ranked. In this scoring procedure, as in the case of scoring for approximation-to-accuracy, only the 22 items which did not have "I don't know" alternatives were used. This score allowed for an additional control to be introduced in the analysis of the data.

The Computer Program and Statistics

Scores and biographical information for each individual were coded and punched on IBM cards. These were then fed into a 7040 IBM computer using the CROS-1 program.[28] The CROS-1 program is designed for use with ordinal and nominal variables and it allows the calculation of a number of statistics as well for the subdivision of data. Of the several possible statistics, the computer was instructed to calculate gamma[29] and its significance level.

Gamma is a measure of association which is based on predicting the direction of order and how consistently this order is reproduced. Since gamma assumes instrinsic order in the cross-classified variables, it is a measure appropriate only for ordinal or quasi-ordinal data.



Gamma was, then, an appropriate measure for showing the degree of relationship between such variables as degree of accuracy of perception of human behavior, as degree of optimism-pessimism, and degree of maladjustment-adjustment. While the accuracy and optimism-pessimism scores were expressed as ranks, the adjustment scores were simply dichotomized but it was assumed that these adjustment and maladjustment categories represented greater and lesser degrees of adjustment. For these reasons, then, gamma was chosen as the measure of association to be used in this research.

Each measure of association was tested for significance, the level of significance being set at .05. Because this study involved a nonprobability sample, generalization beyond the study group is not legitimate.[30] Tests of significance were used simply to indicate the likelihood that the findings of this research could be attributed to random factors such as response variablity or random errors of measurement.

FOOTNOTES

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[3]G. A. Foulds, T. M. Caine, and M. A. Creasy, "Aspects of Extra and Intro-punitive Expression in Mental Illness," Journal of Mental Science, CVI (April, 1960), pp. 599-619.

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[5]C. A. Jorgenson, "A Short Form of the MMPI," Australian Journal of Psychology, X (No. 3, 1958), pp. 341-50.

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[17] Hathaway and McKinley, op. cit., p. 6.

[18] C. V. Lair and E. P. Trapp, "The Differential Diagnostic Value of the MMPI with Somatically Disturbed Patients," Journal of Clinical Psychology, XVIII (No. 2, 1962), pp. 146-47.

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[23] Ibid., p. 166.

[24] "Prediction of Human Behavior Questionnaire," Appendix I.

[25] Hathaway and McKinley, op. cit., p. 10.

[26] S. R. Hathaway and P. E. Meehl, An Atlas for the Clinical Use of the MMPI (Minneapolis: University of Minnesota Press, 1951).

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CHAPTER V

THE RESULTS

THE RELATIONSHIP BETWEEN ADJUSTMENT AND THE PERCEPTION OF SOCIAL REALITY

As a preliminary to the actual analysis of the data, distributions of the crude accuracy and approximation-to-accuracy scores of the respondents in each of the groups under consideration (MMPI-adjusted, MMPI-maladjusted, nonhospitalized, and hospitalized) were plotted. Looking first at Fig. 1, it appears that the two maladusted groups have slightly more low, crude accuracy scores and fewer high crude accuracy scores, that is, they are less accurate. Although there are these differences at the ends of the range of scores, there is at the same time little difference in the median scores for the four groupings of respondents - the median score for the MMPI adjusted, MMPI maladjusted, and hospitalized is 14; the median score for the nonhospitalized is 15.

Turning to the graph of approximation-to-accuracy score, Fig. 2, the distribution for the MMPI-adjusted, MMPI-maladjusted, and nonhospitalized are very similar. The distribution of scores for the hospitalized respondents, on the other hand, shows slightly greater inaccuracy on their part.[1] There is also greater divergence of the median scores in this case with the two adjusted categories having medians of 46, the MMPI maladjusted having a median of 47, and the hospitalized having a median of 48.

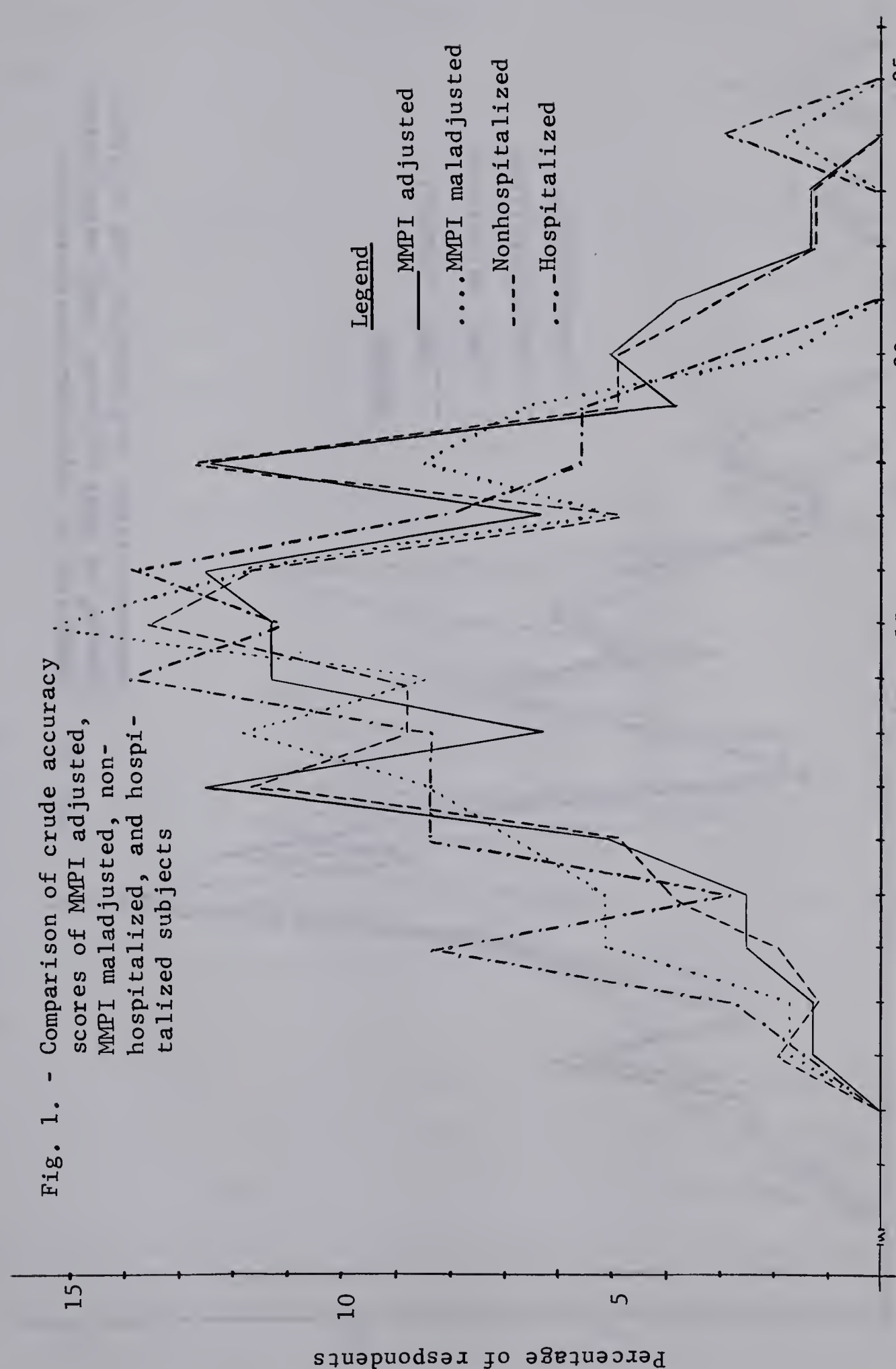
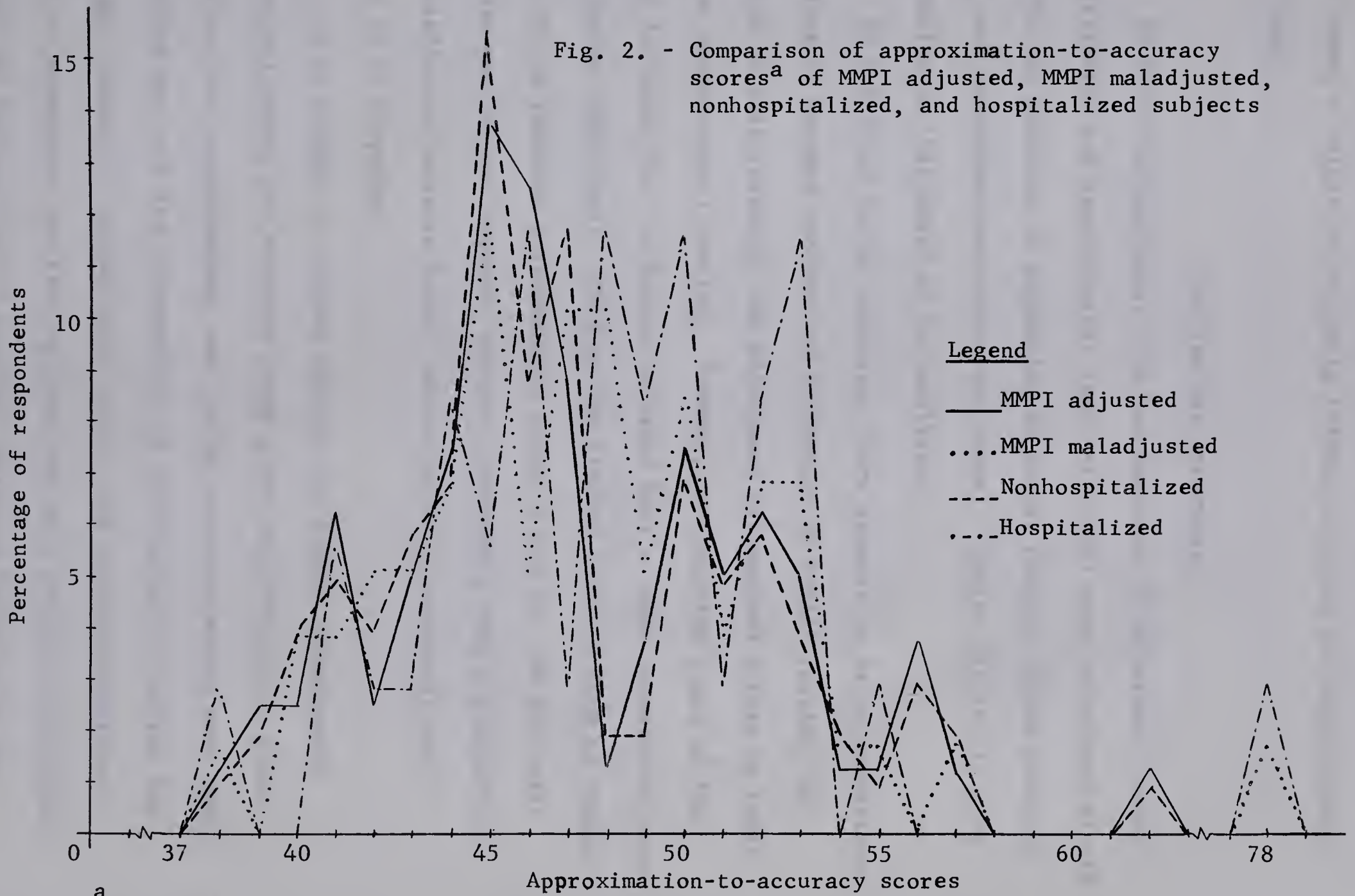
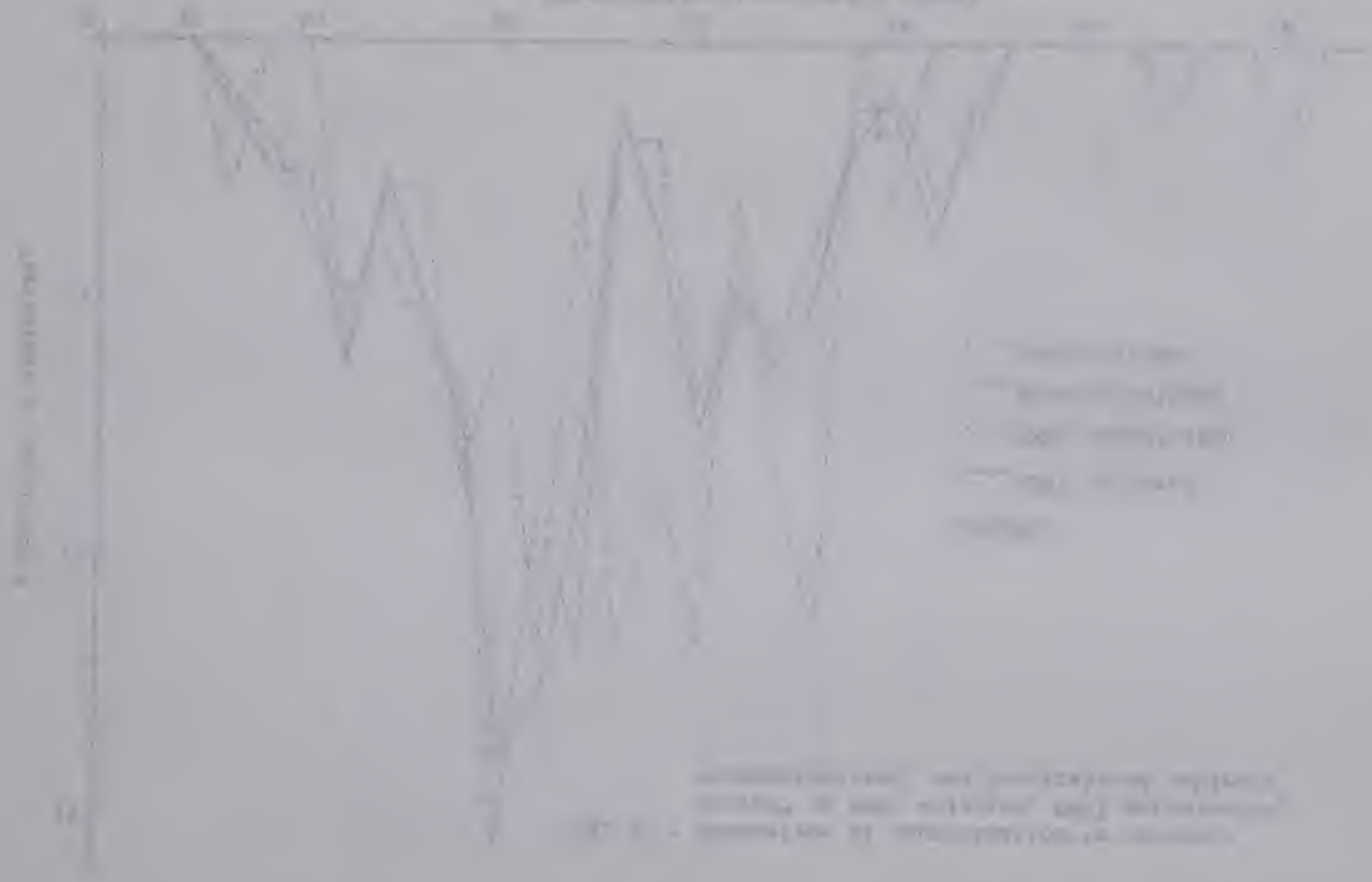


Fig. 1. - Comparison of crude accuracy scores of MMPI adjusted, MMPI maladjusted, non-hospitalized, and hospitalized subjects

Fig. 2. - Comparison of approximation-to-accuracy scores[a] of MMPI adjusted, MMPI maladjusted, nonhospitalized, and hospitalized subjects



[a]The lowest numerical approximation-to-accuracy scores are the more accurate ones.



From an examination of the graphs and the median scores, one would expect a slight relationship between accuracy and psychological well-being.

TESTING THE HYPOTHESIS

To test the hypothesis, the two measures of adjustment (treatment criterion and psychological test criterion) were correlated singly with the two measures of perception of social reality (crude accuracy score, and approximation-to-accuracy score). Tables 5:1 to 5:4 give the results of this phase of the analysis.

As the these tables indicate, there appears to be no significant relationship between accuracy of perception of social reality, as measured in this research, and adjustment as measured either by treatment or psychological testing. However, the negative signs of the gammas indicate that the better adjusted have a light superiority over maladjusted individuals. This is the finding expected from an examination of the response distributions (Figs. 1 and 2). On the basis of these preliminary results, the null hypothesis that the adjusted and maladjusted perceive social reality equally accurately would appear to be supported.

In an attempt to discern whether the slight relationship between adjustment and accuracy noted above was affected by other variables, the two adjustment and the two accuracy scores were again correlated but with the introduction of subdivision to control for sex, age, education, occupational status, and optimism-pessimism. Table 5:5 summarizes the findings when the data are thus subdivided. Although the introduction of controls increased the size of the

TABLE 5:1. - Correlation of adjustment (treatment criterion) and accuracy of perception (crude accuracy score)

Treatment Criterion	Crude Accuracy Scores Low	Medium	High	Total
Nonhospitalized	26	49	28	103
Hospitalized	11	20	5	36
TOTAL	37	69	33	139

GAMMA = -0.222 Z = 0.93

TABLE 5:2. - Correlation of adjustment (treatment criterion) and accuracy of perception (approximation-to-accuracy score)

Treatment Criterion	Approximation-to-accuracy Scores Low	Medium	High	Total
Nonhospitalized	31	43	29	103
Hospitalized	14	14	8	36
TOTAL	45	57	37	139

GAMMA = -0.159 Z = 0.67

TABLE 5:3. - Correlation of adjustment (MMPI criterion) and accuracy of perception (crude accuracy score)

MMPI Criterion	Crude Accuracy Score Low	Medium	High	Total
Adjusted	20	38	22	80
Maladjusted	17	31	11	59
TOTAL	37	69	33	139

GAMMA = -0.150 Z = -0.70

TABLE 5:4. - Correlation of adjustment (MMPI criterion) and accuracy of perception (approximation-to-accuracy score)

MMPI Criterion	Approximation-to-Accuracy Score Low	Medium	High	Total
Adjusted	26	32	22	80
Maladjusted	19	25	15	59
TOTAL	45	57	37	139

GAMMA = -0.018 Z = -0.09

TABLE 5.5. - Gammas for the two measures of adjustment correlated with the two measures of accuracy under various control conditions

psychological test criterion correlated with:	Control Variables: sex		age		education		occupational status		optimism-pessimism	
	male	female	young	old	low	high	low	high	opt.	pess.
1. crude accuracy score	0.125	-0.580	-0.060	-0.349	-0.019	0.058	-0.199	0.143	-0.200	-0.471
2. approximation to accuracy score	-0.431	-0.024	-0.021	-0.475	-0.221	0.141	-0.037	-0.115	-0.154	-0.492
treatment criterion correlated with:										
1. crude accuracy score	-0.104	-0.446	0.185	-0.473	-0.021	0.534	-0.042	0.032	-0.000	-0.442
2. approximation to accuracy score	-0.196	-0.295	-0.231	-0.177	-0.313	0.486	-0.351	-0.097	-0.101	-0.395

gammas, none of the correlation coefficients obtained when the data were subdivided reached the .05 level of significance. This finding confirms the earlier conclusion that there is no difference in the accuracy of perception of social reality between adjusted and maladjusted individuals.

RESCORING THE QUESTIONNAIRE

In the hope that the relationship between perception of social reality (as measured by the questionnaire) and adjustment would be clarified, the questionnaire was item-analyzed. Frequency distributions of responses by MMPI adjusted, MMPI maladjusted, nonhopitalized, and hospitalized subjects were recorded for each item. Following this chi-square was used to test whether any differences in response patterns appeared when MMPI-adjusted and MMPI-maladjusted subjects were compared and when nonhospitalized and hospitalized subjects were compared. Items were chosen not on the basis of whether there were differences in response pattern (both groups could be equally inaccurate in this case). Any item for which the difference in response distribution was significant at the .10 level or better was thought to be a discriminating one. This led to the selection of 22 differentiating items (items 3, 5, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 21, 25, 27, 28, 29, 31, 34, 37, 38, 40). Item 26 also showed a significantly different distribution but it was excluded because of doubts about the validity of the information on which it was scored. All significant items were used for the new crude accuracy score, however, because of difficulty in scoring items with "I don't know" alternatives, items 21, 25, 28, 29, 34, 37, 38, and 40 were not included in the approximation to accuracy score.

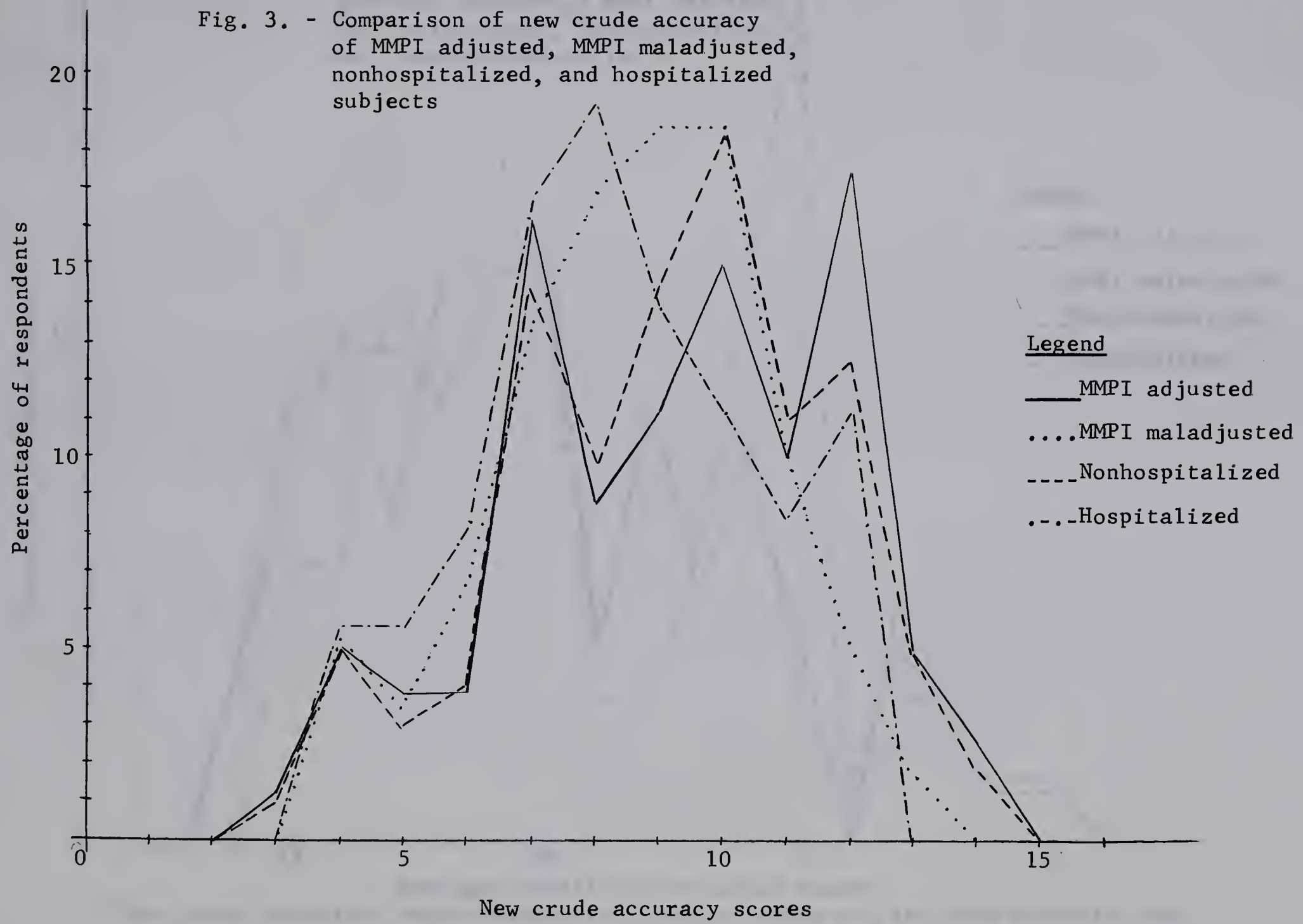
Ideally, once the discriminating items were culled out they should have been administered to a new sample. However, since the aim of the item-analysis was not the development of a standardized test, but the elimination of items that were of little importance or that perhaps, confounded the total scores, cross-validation was not thought to be necessary. In addition, the limits of time precluded the possibility of getting a new sample and gathering new data. Accordingly, each respondent was rescored for crude accuracy and approximation to accuracy on the basis of the discriminating items.

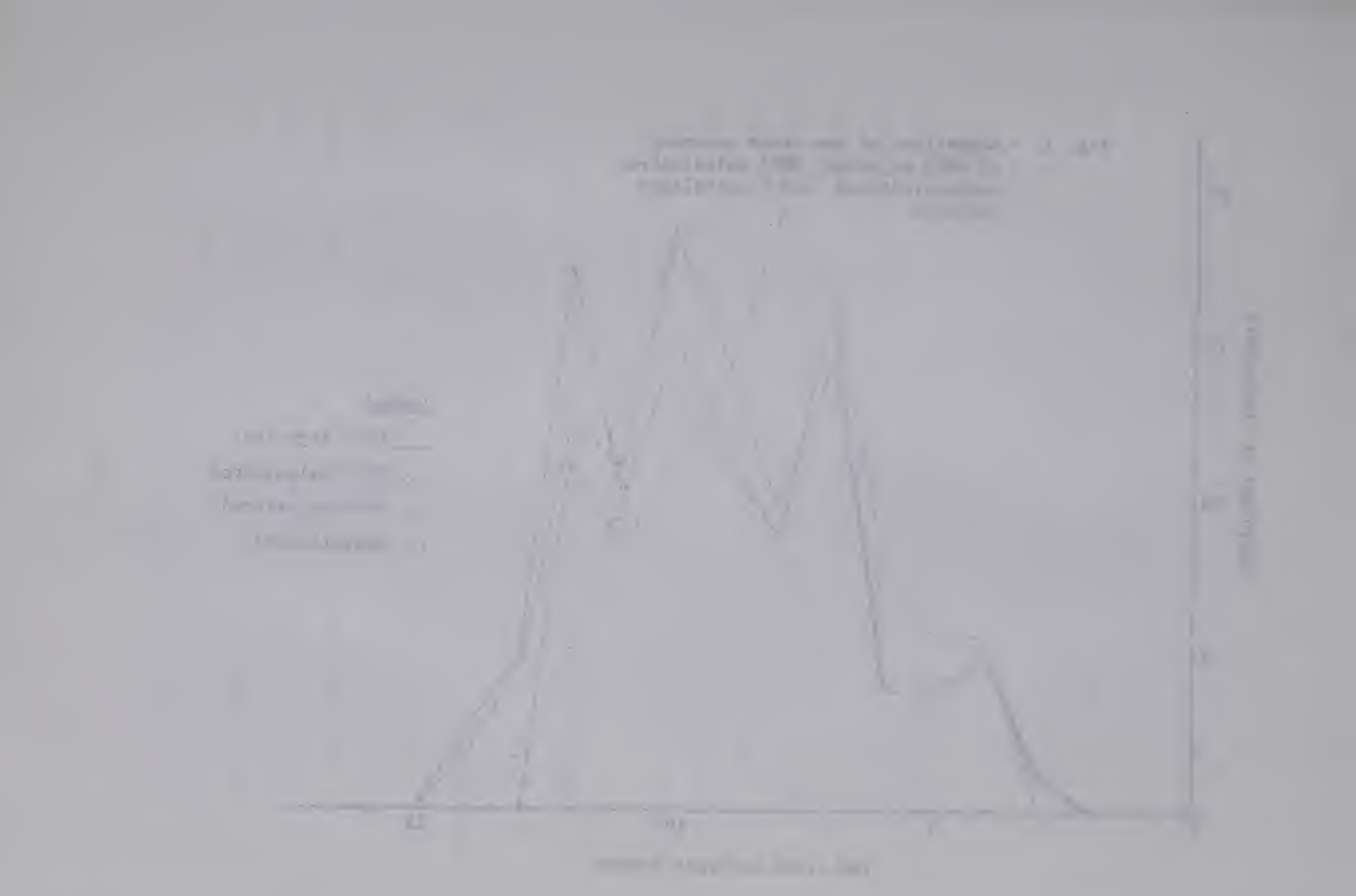
AN ILLUSTRATION OF THE RELATION BETWEEN ADJUSTMENT AND THE NEW ACCURACY SCORES

Distribution of the crude accuracy and approximation to accuracy score for respondents were again graphed. As Fig. 3 shows there is again little difference between the distributions of scores (new crude accuracy) for the MMPI-adjusted, MMPI-maladjusted, nonhospitalized, and hospitalized though the adjusted show a slight superiority. There is also little difference in the median scores for the four groups - the median score for the adjusted, maladjusted, and nonhospitalized is nine; the median score for the hospitalized is eight.

A distribution of the new approximation-to-accuracy scores (Fig. 4) fails to reveal any marked differences between the different groups of respondents with the possible exception of the hospitalized who again are less accurate. Median scores for the adjusted, maladjusted, and nonhospitalized are again the same (29) while the median for hospitalized individuals is higher at 30.

Fig. 3. - Comparison of new crude accuracy of MMPI adjusted, MMPI maladjusted, nonhospitalized, and hospitalized subjects





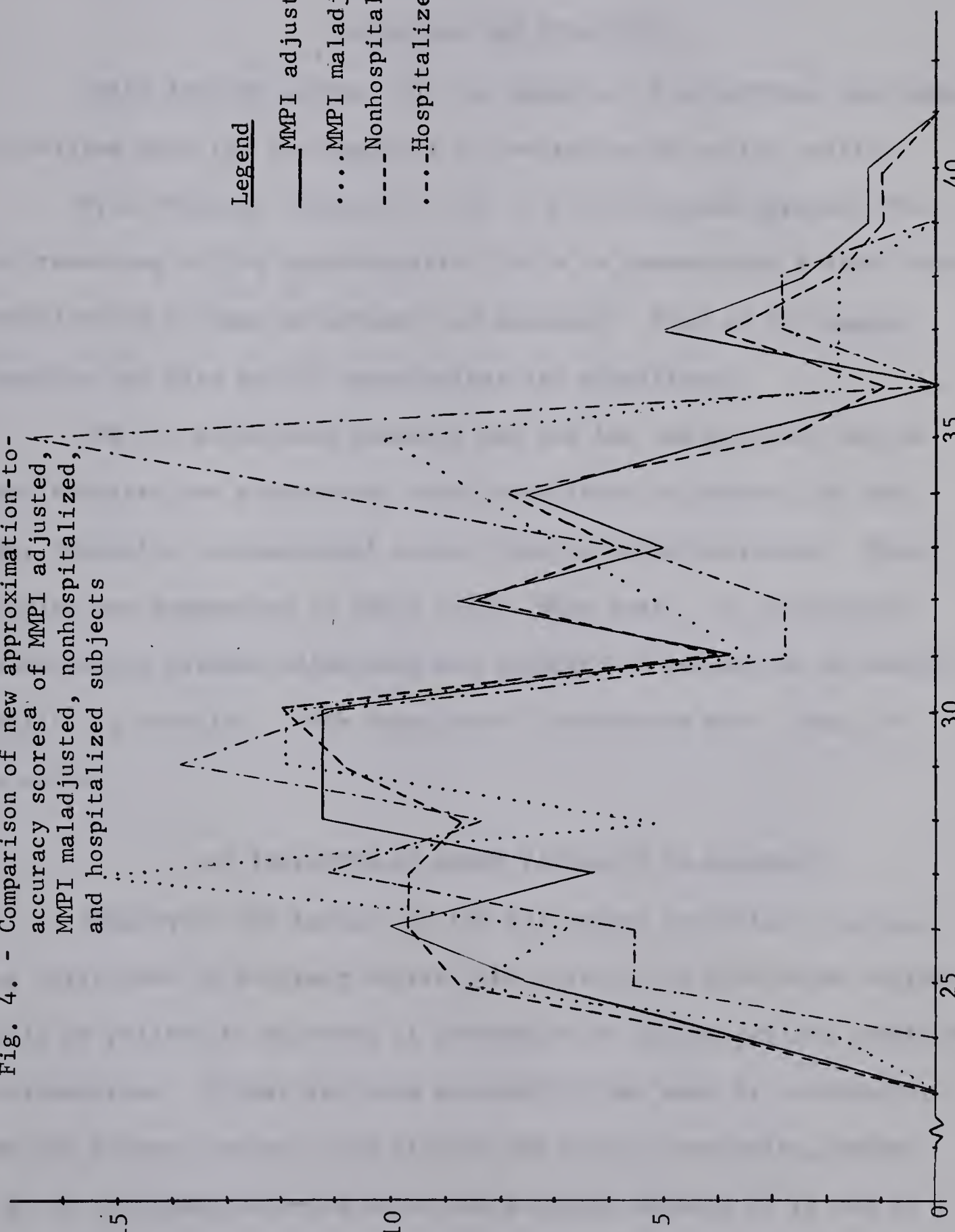


Fig. 4. - Comparison of new approximation-to-accuracy scores[a] of MMPI adjusted, MMPI maladjusted, nonhospitalized and hospitalized subjects

[a] The lowest numerical approximation-to-accuracy scores are the more accurate ones.

One would expect from this inspection of the distributions of scores that analysis would again show little relation between adequate adjustment and accurate perception.

RETESTING THE HYPOTHESIS

Using the new scores, the two measures of adjustment were again correlated with the two measures of perception of social reality.

From study of tables 5:6 to 5:9, it becomes apparent that the rescoring of the questionnaires fails to demonstrate a significant relationship between adjustment and accuracy. None of the gammas reported for this set of correlations are significant.

The two adjustment measures and the two new accuracy scores were examined for association with subdivision to control for sex, age, education, occupational status, and optimism-pessimism. These finding are summarized in Table 5:10. Once again, no significant relationship between adjustment and accuracy of perception of social reality is revealed. Both experimental hypotheses must, then, be rejected.

THE INFLUENCE OF OTHER VARIABLES ON ACCURACY

Because of the failure of the adjustment criteria to account for variations in accuracy scores, the possibility that other variables could be related to accuracy of perception of social reality required consideration. A test for this possibility was made by correlating the two accuracy scores with each of the control variables, except that of optimism-pessimism which was excluded because it is not an index independent of the accuracy scores.

TABLE 5:6. - Correlation of adjustment (treatment criterion) and accuracy of perception (new crude accuracy score)

Treatment Criterion	New Crude Accuracy Scores Low	Medium	High	Total
Nonhospitalized	19	51	33	103
Hospitalized	12	16	8	36
TOTAL	31	67	41	139

GAMMA = -0.280 Z = -1.21

TABLE 5:7. - Correlation of adjustment (treatment criterion) and accuracy of perception (new approximation-to-accuracy score)

Treatment Criterion	New Approximation-to-Accuracy Scores Low	Medium	High	Total
Nonhospitalized	28	44	31	103
Hospitalized	13	16	7	36
TOTAL	41	60	38	139

GAMMA = -0.214 Z = -0.92

TABLE 5:8. - Correlation of adjustment (MMPI criterion) and accuracy of perception (new crude accuracy score)

MMPI Criterion	New Crude Accuracy Scores Low	Medium	High	Total
Adjusted	17	41	22	80
Maladjusted	14	26	19	59
TOTAL	31	67	41	139
GAMMA = 0.030		Z = 0.14		

TABLE 5:9. - Correlation of adjustment (MMPI criterion) and accuracy of perception (new approximation-to-accuracy score)

MMPI Criterion	New Approximation-to-Accuracy Scores Low	Medium	High	Total
Adjusted	24	28	28	80
Maladjusted	17	32	10	59
TOTAL	41	60	38	139
GAMMA = -0.179		Z = -0.86		

TABLE 5:10. - Gammas for the two measures of adjustment correlated with the two new measures of accuracy under various control conditions

Correlated variables	Control variables: sex		age		education		occupational status		optimism-pessimism	
	male	female	young	old	low	high	low	high	opt.	pess.
MMPI adjustment and new crude accuracy score	-0.151	-0.230	0.057	-0.447[a]	0.163	-0.232	0.049	-0.121	-0.117	-0.445
MMPI adjustment and new approximation to accuracy score	0.063	-0.040	-0.330	-0.348	-0.000	0.457	0.036	0.362	-0.505	-0.145
Treatment and new crude accuracy score	-0.106	-0.396	-0.031	-0.386	-0.099	0.277	0.018	-0.099	-0.400	-0.357
Treatment and new approximation to accuracy score	-0.282	-0.258	-0.143	-0.488	-0.351	0.757[a]	-0.368	0.417	-0.586	-0.044

[a]Approaching significance.

TABLE 5:11. - Gammas showing the correlation between the accuracy scores and other variables

accuracy score	sex	age	education	occupational status
crude accuracy score	-0.022	0.202	0.401[a]	0.319
approximation to accuracy score	-0.044	0.002	0.283	-0.235
new crude accuracy score	0.000	0.075	0.462[a]	-0.343
new approximation to accuracy score	-0.091	-0.104	0.404[a]	-0.296

[a]Significant at the .05 level or better.

Of the variables considered in table 5:11, the only one significantly related to accuracy of perception of social reality is that of education. The meaning of this finding may be either that accuracy of perception of social reality is, in fact, related to education, or that the research instrument designed to measure accuracy of perception of social reality is no more than an index of information and knowledge. If the former is true, then it is possible that Pomeroy's postulation, alluded to earlier (see page 22), that the poorly educated are more perceptive of others needs revision.

FOOTNOTES

[1] It is important to note that in the case of approximation-to-accuracy scores, the lowest numerical scores represent greater accuracy.

CHAPTER VI

SOME IMPLICATIONS

If the principle finding of this research is accepted - that the maladjusted and adjusted perceive social reality equally accurately and, perhaps, equally inaccurately - some far reaching implications are suggested.

If we look at this finding in terms of the sociology of knowledge, it becomes evident that several ideas concerning bias must be considered. In Chapter I (see p. 10) it was suggested that those who are not totally immersed in their social field may be better able to see reality. It was implied that maladjustment may be a state in which the individual is somewhat detached and in which the individual may be better able to see reality.[1] Further, it was suggested that the bias of the mentally ill individual may be a fruitful one. These speculations have not been supported by the findings of this research.

It may be that the adjusted and maladjusted share the same biases or that, if their biases differ, they are equally distorting. Whichever alternative is correct, the implication is the same.

It remains possible that other forms of detachment (alienation) than those typified by psychic distress may be productive of accurate perception of reality.

The findings also suggest the possibility that the lack of difference in the social perceptions of "healthy" and "sick" people merely reflects the ubiquity of ignorance.

Most important, the present results challenge the popular equation of adjustment with accurate perception of social reality and

some revision of our conception of mental illness is called for. The common reference to perception of social reality as a criterion of emotional disturbance appears unwarranted. Indeed, the assumption that maladjustment is related to misperception of any sort may be questioned. Perception may not be relevant!

Another possibility exists - the possibility that inaccuracy of perception is related not to maladjustment generally but only to specific forms of maladjustment. This, of course, appears to be the case in regards to perception of body image (see pp. 16-17) and it may also be the case with psychophysical perception (see pp. 22-23). Such a possibility may explain the slight but not significant superiority in the perception of adjusted individuals observed in this research. Testing for such an alternative would be relatively easy but it would require having a large sample including a good cross-section of the various diagnostic categories as well as "normal" subjects.

If it is necessary to revise our ideas concerning the relationship between social perception and adjustment then some of the approaches to psychotherapy also require change. This is particularly true of Roger's client-centered therapy and similar approaches that assume the goal of therapy to be the alteration of the patient's social vision.

Revision of other psychological concepts may also be necessary. Throughout the psychological and psychiatric literature there is reference to the importance of reality-contact and reality-testing for psychological well-being. Aside from the fact that the definitions of these concepts are vague, there has been little research to determine what these processes involve, whether there are differences

between the adjusted and the maladjusted in the operation of these processes, and, most important, whether reality-contact and reality-testing are, in fact, significant variables. If there is no difference in the perceptual accuracy of the maladjusted and adjusted, then there may not be differences in their contact with and testing of reality.

The final implication of this research reverts to a question in the sociology of knowledge: What social factors led students of man to assume that certain disapproved behaviors result in or from errors of perception? This question gains moment as one notices that such a key assumption has so rarely been examined and that it persists upon so little evidence.

FOOTNOTES

[1] A similar implication is found in Koestlers statement that "The relation between intelligensia and neurosis is not accidental, but functional." A. Koestler, "The Intelligensia," Partisan Review, XI, (Summer, 1944), p. 274.

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APPENDIX I

THE QUESTIONNAIRE

PREDICTION OF HUMAN BEHAVIOR

Numerous studies have been conducted in Canada and the United States to determine how people behave in a variety of situations. Even though you might not behave as does the majority of individuals in these various situations, we are interested in your views of how others act.

In the following instances, please examine the various possibilities and indicate which one you think best reflects how people behave by placing the letter of the correct response in the appropriate space in the answer sheet. Please make no marks on the Questionnaire itself.

Your answers are anonymous. Please do not write your name on any of the pages.

1. Suppose that you owned a large department store such as the Hudson's Bay. What percentage of your credit accounts would not be repaid?

   a) 25.0%
   b) 10.0%
   c) 5.0%
   d) 2.5%
   e) 1.0%

2. What proportion of the urban population would you estimate conduct their business on a strictly cash basis, that is, they buy nothing on credit?

   a) 90%
   b) 75%
   c) 50%
   d) 25%
   e) 10%

3. What proportion of the population would you estimate has never committed a traffic offense?

   a) 90%
   b) 75%
   c) 50%
   d) 25%
   e) 10%

4. What proportion of drivers who damage parked cars do you think would report the accident?

   a) 90%
   b) 75%
   c) 60%
   d) 30%
   e) 10%

5. What percentage of Canadians would you estimate do not believe in God?

   a) 50%
   b) 25%
   c) 10%
   d) 5%
   e) less than 5%

6. What percentage of Canadians do you think actually belong to some church?

   a) 90% or more
   b) 75%
   c) 60%
   d) 50%
   e) 25%

7. Investigators dropped stamped, addressed envelopes obviously containing coins on the streets of a number of large cities. How many of these envelopes do you think were dropped in the mail box by the persons who found them?

   a) 100%
   b) 90%
   c) 75%
   d) 50%
   e) 25%

8. What proportion of people have stolen something since they were age sixteen?

   a) 100%
   b) 90%
   c) 75%
   d) 50%
   e) 25%

9. How many employees would you say have stolen goods from their employers?

   a) 90%
   b) 75%
   c) 50%
   d) 25%
   e) 10%

10. Elementary school children were secretly given an opportunity to cheat on tests. How many of the children do you think cheated?

    a) 75%
    b) 50%
    c) 25%
    d) 10%
    e) 5%

11. Of all children born what proportion would you estimate are planned births?

    a) 90%
    b) 75%
    c) 50%
    d) 30%
    e) 10%

12. What percentage of all births in Alberta are illegitimate?

    a) 25%
    b) 10%
    c) 5%
    d) 1%
    e) less than 1%

13. "Most people have babies because they like them and want them."

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

14. If a person gets married in Alberta what are the odds that the marriage will end in divorce, separation, or desertion?

    a) 1 chance in 100
    b) 1 chance in 50
    c) 1 chance in 20
    d) 1 chance in 10
    e) 1 chance in 5

15. In our metropolitan areas what proportion of women engage in sexual intercourse before marriage?

    a) 90%
    b) 75%
    c) 50%
    d) 25%
    e) 10%
    f) 5%

16. The proportion of men who engage in sexual intercourse before marriage is probably:

    a) 90%
    b) 75%
    c) 50%
    d) 25%
    e) 10%

17. The proportion of married women who at some time during their marriage have sexual intercourse with men other than their husbands is probably:

    a) 75%
    b) 50%
    c) 25%
    d) 10%
    e) 5%

18. The proportion of married men who at some time during their marriage have sexual intercourse with women other than their wives is probably:

    a) 90%
    b) 75%
    c) 50%
    d) 25%
    e) 10%
    f) 5%

19. Among men over sixteen years of age what proportion has had sexual relations with other men?

    a) 75%
    b) 50%
    c) 25%
    d) 10%
    e) 5%

20. Among women over sixteen years of age what proportion has had sexual relations with other women?

    a) 75%
    b) 50%
    c) 25%
    d) 10%
    e) 5%

21. In a democratic country such as Canada, children from poor families are just as likely to get a high school education as are children from wealthy families.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

22. The best indicator of a young man's future economic success is the success of his father.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

23. The chances that a young man will do better economically and educationally than his father are greater in Canada and the United States than they are in such countries as England and Germany.

    a) This satement is probably true.
    b) I don't know.
    c) This statement is probably false.

24. Because money can buy better medical care and better food, people who have money live longer, that is, they live to older ages.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

25. Of people charged with criminal offenses, the poor man is more likely to be found guilty than the rich man.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

26. Indians, Negroes, and people belonging to other "visible" racial groups are treated unfairly by police.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

27. Suppose you are an Indian living in Canada. How many Canadians do you think would regard you as inferior?

    a) 90%
    b) 75%
    c) 50%
    d) 25%
    e) 10%

28. Three-quarters of the population feels superior to some racial or national group.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

29. Measures of mental ability (intelligence) among school children in Canada and the United States have shown consistent differences in the average performance of racial and national groups. That is, some of these groups always score higher and some lower than others.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

30. What proportion of Canadians would you estimate drink alcoholic beverages?

    a) 90%
    b) 75%
    c) 65%
    d) 50%
    e) 25%

31. Of those who drink alcoholic beverages, what proportion would you estimate are alcoholics, that is, they cannot live without drinking?

    a) 50%
    b) 25%
    c) 10%
    d) 5%
    e) less than 5%

32. Drug addicts in Canada and the United States often resort to crime. From what is known about these people it is quite probably that they would be criminals with or without drugs.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

33. 80,000 people are in Canadian mental hospitals and there are twice that many who need hospitalization but never get it.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

34. The chances are 1 in 10 that a person who lives to age seventy-five will spend some time in a mental hospital.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

35. More people commit suicide than die of tuberculosis.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

36. In time of war or disaster, crimes, suicides, divorces, and community conflicts tend to diminish in number.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

37. The response of people to peacetime disaster such as a tornado, or a flood, or a large explosion is typically one of panic.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

38. Very intelligent people are more likely to be physical weaklings than are normal people.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

39. People who are supposed to be experts are often no better judges of what is going to happen than the average individual.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

40. Much of our reasoning consists of finding arguments for going on believing as we already do.

    a) This statement is probably true.
    b) I don't know.
    c) This statement is probably false.

<u>And now would you please answer some questions about yourself</u>. Please use the answer sheet.

1. Sex:

    a) Male
    b) Female

2. Age:

    a) 15-20
    b) 20-29
    c) 30-31
    d) 40-49
    e) 50-59
    f) 60+

3. Years of schooling completed:

    a) 8 years or less
    b) 9 to 12 years
    c) 13 to 16 years
    d) 17+ years

4. Occupation: Please specify the kind of work you do or have done.

5. Ethnic origin:

    a) English, Irish, or Scottish
    b) German
    c) Ukrainian
    d) Scandinavian
    e) French
    f) Dutch
    g) Polish
    h) Jewish
    i) Other (specify)

6. Marital Status:

    a) Single
    b) Married for the first time
    c) Re-married
    d) Separated
    e) Divorced
    f) Widowed

7. Whatever your present status, have you ever been:

    a) Divorced?
    b) Widowed?

APPENDIX II

EVIDENCE ACCORDING TO WHICH ACCURACY WAS GAUGED

Question 1: Personal communication from Edmonton department stores indicate that about 1% of all accounts are defaulted.[1] Alternative scored as accurate response: e) 1.0%

Question 2: An article in MacLean's magazine estimates that 10% of the Canadian population leads a wholly cash-and-carry existence.[2] This question is a poor one simply because there are many kinds of credit. Alternative scored as accurate response: e)10%

Question 3: The traffic statistician at the Edmonton City Police Department estimates that 20% is a conservative figure for those who do not commit traffic offenses.[3] Alternative scored as accurate response: d) 25%

Question 4: Again the source of information for the formulation of this question is the traffic statistician at the Edmonton City Police Department, who estimates that more than two-thirds of all those who damage parked cars fail to report the accident.[4] Alternative scored as accurate response: d) 30%

Question 5: There are, of course, no available figures showing who does and who does not believe in God but when one considers that between 2.5% and 3% of all Americans believe in no religion, an estimate of less than 5% would be a reasonable one.[5] One must assume that Canadians and Americans are alike in this respect. Alternative scored as accurate response: e) less than 5%

Question 6: The Yearbook of American Churches[6] indicates that 63% of all Americans belonged to some church. Since no comparable figures for actual church membership in Canada are available, 75% was used as a conservative estimate. Alternative scores as accurate response: b) 75%.

Question 7: A study by Merritt and Fowler[7] found that while 85% of the ordinary letters they dropped were returned, only 54% of the letters containing slugs resembling a fifty-cent piece were returned. Alternative scored as accurate response: d) 50%

Question 8: Nettler[8] found that the majority of his respondents admitted to having stolen something since the age of sixteen. In addition, studies quoted by Deutsch[9] indicate this figure to be in the neighborhood of 75%. Alternative scored as accurate response: c) 75%

Question 9: Lie detection tests of employees indicate that 75% of them pilfer funds from their employers.[10] Alternative scored as accurate response: b) 75%

Question 10: Hartshorne and May[11] found that the number of children who cheated on tests when given the opportunity was in the neighborhood of 30%. Alternative scored as accurate response: c) 25%

Question 11: Hall and Mohr[12] found that one-third of all the births in their sample were planned. A similar finding was reported in the Indianapolis study.[13] Alternative scored as accurate response: d) 30%

Question 12: For the year 1961, 6.5% of all births in Alberta were illegitimate.[14] Alternative scored as accurate response: c) 5%

Question 13: Figures concerning the extent of unwanted children vary considerably, but it would hardly be correct to say that most people have babies because they like them and want them. For lower class families the number of unwanted children goes above 50%.[15] Alternative scored as accurate response: c) This statement is probably false.

Question 14: No Canadian statistics are available in this area. It is estimated that about 1 in 4 American marriages end in divorce.[16] Because of rigid Canadian divorce laws, divorce is less frequent in Canada; however, separation and desertion probably make up the difference. An estimate of 1 in 5 Canadian marriages ending in divorce, separation, and desertion would probably be relatively accurate, however, the more conservative figure of 1 in 10 was used in this case. Alternative scored as accurate response: d) 1 chance in 10

Question 15: Kinsey[17] says that 50% of all females engage in premarital coitus. Alternative scored as accurate response: c) 50%

Question 16: These figures vary with education - 0-9yrs.= 98%, 9-12yrs.= 85%, 13+yrs.= 68% of all males engage in premarital coitus.[18] Alternative scored as accurate response: b) 75%

Question 17: Up to age forty, 26% of all married females had had extramarital coitus according to Kinsey.[10] Alternative scored as accurate response: c) 25%

Question 18: Kinsey found that up to age forty, 50% of all married males had had extramarital coitus.[20] Alternative scored as accurate response: c) 50%

Question 19: Thirty-seven per cent of the male population has some homosexual experience to the point of orgasm between adolescence and old age; 50% have some homosexual contact.[21] Alternative scored as accurate response: c) 25%

Question 20: Twenty-eight per cent of adult females have homosexual responses but only 12% respond to the point of orgasm.[22] Alternative scored as accurate response: d) 10%

Question 21: Aspiration for and attainment of a high school education depends partly on social class with the upper classes having both higher aspiration and attainment.[23] Alternative scored as accurate response: c) This statement is probably false.

Question 22: Only 18% of the Canadian economic elite have worked their way from the bottom of the socio-economic scale to the top, whereas, 31% have come from economically successful families. Porter[24] found also that 82% of the economic elite have middle class or higher origins. Alternative scored as accurate response: c) This statement is probably false.

Question 23: Though the idea that North America is a land of opportunity is a popular one, studies of intergenerational mobility in North America and Europe indicate that opportunity for climbing the

status hierarchy is no greater in North America.[25] Alternative scored as accurate response: c) This statement is probably false.

Question 24: "The higher the class, the lower the morbidity and the longer the life expectancy - mainly due to the nutritive, hygienic, and medical advantages that money can buy."[26] Alternative scored as accurate response: a) This statement is probably true.

Question 25: "The lower classes presumably violate the law more frequently than the upper classes; in any case, they are more likely to be caught and punished . . . 'Although the data are scanty and unsystematic there is strong evidence of class bias in the administration of justice and legal protection in our society.'"[27] Alternative scored as accurate response: a) This statement is probably true.

Question 26: The literature offers much evidence concerning the law's unequal treatment of minority groups; however, this evidence has on occasion been questioned.[28] Because of doubts about the evidence, this question was excluded in the rescoring of the questionnaire. Alternative scored as accurate response: a) This statement is probably true.

Question 27: Although no statistical evidence is available on this matter, an estimate of 75% would not likely be incorrect for this question. Of course, there is some justification for this feeling. Alternative scored as accurate response: b) 75%

Question 28: Again although there is no direct evidence available, indications are that three-quarters of the population feels superior to some racial or national group.[29] Alternative scored as accurate response: a) This statement is probably true.

Question 29: There have been numerous studies that showed that certain racial or national groups achieve lower scores on intelligence tests than white, Protestant children.[30] The reasons for this finding are many but the differential cannot be denied. Alternative scored as accurate response: a) This statement is probably true.

Question 30: A recent study indicates that 65% of all adult Canadians use alcoholic beverages.[31] Alternative scored as accurate response: c) 65%

Question 31: The above study found that of those Canadians who drink alcoholic beverages less than 5% are alcoholics.[32] Alternative scored as accurate response: d) 5%

Question 32: "The addict tends to commit his crimes after he has been addicted - and as a result of his addiction . . . The high cost of drugs functions as a powerful incentive towards certain forms of theft and pilfering."[33] Alternative scored as accurate response: c) This statement is probably false.

Question 33: A figure of 160,000 Canadians needing institutional care for mental illness is a very conservative estimate.[34] The Canadian Mental Health Association estimates that 1.8 million

Canadians have some form of mental or emotional disorder needing professional treatment.[35] Not all of this care would be on an in-patient basis, however. Alternative scored as accurate response: a) This statement is probably true.

Question 34: Terman and Oden[36] estimate that one person in 10 who lives to age seventy-five will spend some of that time in a mental hospital. Alternative scored as accurate response: a) This statement is probably true.

Question 35: "Suicide . . . set a new record total of 1,271 deaths [in Canada] in 1958 - a more potent killer than tuberculosis or drowning, a toll twice that of fire."[37] Alternative scored as accurate response: a) This statement is probably true.

Question 36: "In time of war, disaster, and physical calamity, as has often been noted, crimes, suicide, divorces, and community conflicts tend to diminish in number . . . The very mobilization of human energies has a tonic effect upon human relationships."[38] Alternative scored as accurate response: a) This statement is probably true.

Question 37: "The notion that people typically 'panic,' become 'hysterical,' or 'go to pieces' in the presence of danger is not supported by disaster research findings . . . Although some cases of individual or small-group panic have occurred in disasters, its frequency and significance in disaster have been grossly exaggerated. It is a rare response rather than a typical one."[39] Alternative scored as accurate response: a) This statement is probably true.

Question 38: Terman's studies of genius found that "the examining physicians are in accord in the belief that on the whole the children in this group are physically superior to unselected children of corresponding age in the school population."[40] Alternative scored as accurate response: c) This statement is probably false.

Question 39: Sterling's findings indicate that it may be true that experts are often no better judges than the average individual.[41] Alternative scored as accurate response: a) This statement is probably true.

Question 40: Research, particularly in political behavior, substantiates the view that much of our reasoning consists of finding arguments for going on believing as we already do.[42] This is also illustrated in the area of minority group attitudes.[43] Alternative scored as accurate response: a) This statement is probably true.

FOOTNOTES

[1] A number of department stores and finance companies were unwilling to divulge information concerning defaulted accounts, however, communications from the T. Eaton Co. Limited and from Simpson Sears Limited place the figure at about 1%.

[2] E. Hutton, "The Great Canadian Credit Spree," MacLeans, August 10, 1963, p. 12.

[3] Personal communication from the traffic statistician at the Edmonton City Police Department.

[4] Ibid.

[5] L. Broom and P. Selznick, Sociology (third edition; New York: Harper and Row, Publishers, Incorporated, 1963), p. 441.

[6] The Yearbook of American Churches cited in U.S.Bureau of Census, Statistical Abstract of the United States; 1965 (86th edition: Washington: U. S. Government Printing Office, 1965), p. 42.

[7] C. B. Merritt and R. G. Fowler, "The Pecuniary Honesty of the Public at Large," Journal of Abnormal and Social Psychology, XLIII (1948), pp. 90-93.

[8] G. Nettler, "Good Men, Bad Men, and the Perception of Reality," Sociometry, XXIV (September, 1961), p. 284.

[9] A. Deutsch, The Trouble With Cops (London: Arco Publishers Ltd., 1955), pp. 154-55.

[10] Ibid, p. 154

[11] H. Hartshorne and M. A. May, Studies in Deceit (New York: The MacMillán Company, 1930), p. 170.

[12] D. E. Hall and G. J. Mohr, "Prenatal Attitudes of Primiparae" Mental Hygiene, XVII (April, 1933), pp. 226-34.

[13] P. K. Whelpton and C. V. Kiser, Social and Psychological Factors Affecting Fertility (5 volumes; New York: Millbank Memorial Fund, 1950-1958), V, p. 1126.

[14] Annual Report of the Department of Public Health (Edmonton: Queen's Printer, 1961), p. 106.

[15] I. Sclanders, "The Birth-Control Explosion," MacLeans, March 21, 1964, p. 39.

[16] W. M. Kephart, The Family, Society, and the Individual (Philadelphia: University of Pennsylvania Press, 1961), p. 602.

[17]A. C. Kinsey, W. B. Pomeroy, C. E. Martin, and P. H. Gebhard, Sexual Behavior in the Human Female (Philadelphia: W. B. Saunders Co., 1953), p. 286.

[18]A. C. Kinsey, W. B. Pomeroy, and C. E. Martin, Sexual Behavior in the Human Male (Philadelphia: W. B. Saunders Co., 1947), p. 552.

[19]Kinsey, Pomeroy, Martin, and Gebhard, op. cit., p. 437.

[20]Ibid.

[21]Ibid., pp. 474-75.

[22]Ibid.

[23]W. B. Brookover and D. Gottlieb, A Sociology of Education (second edition; New York: American Book Company, 1964) p. 167.

[24]J. Porter, "The Economic Elite and the Social Structure in Canada," Canadian Society, eds. B. R. Blishen, F. E. Jones, K. D. Naegele, and J. Porter (New York: The Free Press of Glencoe, Inc., 1961), pp. 486-500.

[25]S. M. Lipset and N. Rogoff, "Class and Opportunity in Europe and the United States," Readings in General Sociology, eds. R. W. O'Brien, C. C. Schrag, and W. T. Martin (Boston: Houghton Mifflin Company, 1964), pp. 395-401.

[26]B. Berelson and G. A. Steiner, Human Behavior: An Inventory of Scientific Findings (New York: Harcourt, Brace and World, Inc., 1964), p. 477.

[27]Ibid., p. 488.

[28]Ibid.

[29]G. W. Allport, The Nature of Prejudice (Doubleday Anchor Books; Garden City: Doubleday and Company, Inc., 1958), p. 77.

[30]G. E. Simpson and J. M. Yinger, Racial and Cultural Minorities (New York: Harper and Row, Publishers, Incorporated, 1958), p. 61.

[31]R. J. Gibbins, "Alcoholism in Canada," Social Problems, ed. R. Laskin (Toronto: McGraw-Hill Company of Canada Limited, 1964), p. 366.

[32]Ibid.

[33]R. R. Korn and L. W. McCorkle, Criminology and Penology (New York: Holt, Rinehart, Winston Inc., 1961), pp. 172-73.

[34] Personal communication from the Canadian Mental Health Association.

[35] Ibid. See also D. C. Leighton, "The Distribution of Psychiatric Symptoms in a Small Town," American Journal of Psychiatry, CXII 1956), pp. 716-23.

[36] L. M. Terman and M. H. Oden, The Gifted Group at Mid-Life (5 volumes; Genetic Studies of Genius; Stanford: Stanford University Press, 1959), V, p. 42.

[37] J. Bryan, "Canada's Alarming Suicide Pattern," Social Problems ed. R. Laskin (Toronto: McGraw-Hill Company of Canada Limited, 1964), p. 401.

[38] R. A. Nisbet, "The Study of Social Problems," Contemporary Social Problems ed. R. K. Merton and R. A. Nisbet (New York: Harcourt, Brace and World, Inc., 1961), p. 5.

[39] Berelson and Steiner, op. cit., p. 623.

[40] L. M. Terman, et al., Mental and Physical Traits of a Thousand Gifted Children (5 volumes; Genetic Studies of Genius; Stanford: Stanford University Press, 1925), I, p. 251.

[41] C. Baril and R. Stirling, "The Perception of Deception and the Prediction of Social Events" (unpublished paper, Department of Sociology, University of Alberta, 1964), pp. 16-17.

[42] G. Lindzey, Handbook of Social Psychology (2 volumes; Reading, Mass.: Addison-Wesley Publishing Company, Inc., 1954), II, p. 1158.

[43] Simpson and Yinger, op. cit., p. 169.